

INDEX OF PATENTS

RELATING TO

ELECTRICITY,

EMBRACING PATENTS ISSUED BY

THE UNITED STATES PATENT OFFICE

FROM JULY 1, 1889, TO JUNE 30, 1890.

APPENDIX No. IX.

COMPILED UNDER THE DIRECTION OF THE COMMISSIONER OF PATENTS.

282518

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

INDEX OF PATENTS
RELATING TO
ELECTRICITY,

EMBRACING PATENTS ISSUED BY

THE UNITED STATES PATENT OFFICE

FROM JULY 1, 1889, TO JUNE 30, 1890.

APPENDIX No. IX.

COMPILED UNDER THE DIRECTION OF THE COMMISSIONER OF PATENTS.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

APPENDIX No. IX.

PART I.

CONSISTING OF A

SUB-CLASS INDEX OF ALL PATENTS

RELATING TO

ELECTRICITY

Issued from July 1, 1889, to June 30, 1890, inclusive, giving names of Inventors,
and dates and numbers of Patents in each sub-class in
numerical and chronological order.

CLASSIFIED INDEX

OF

PATENTS RELATING TO ELECTRICITY

FROM JULY 1, 1889, TO JUNE 30, 1890.

171. GENERATION.—6. BATTERIES—GALVANIC.

No.	NAME.	DATE.	No.	NAME.	DATE.
406,168	Hussey, C. A	July 2, 1889	418,837	Armstrong, C. G	Jan. 7, 1890
406,169	Hussey, C. A	July 2, 1889	419,633	Burnley, W	Jan. 21, 1890
406,223	Lee, J. E	July 2, 1889	419,774	Irish, W. E	Jan. 21, 1890
406,636	Dougans, M	July 9, 1889	419,730	Stanley, L. T	Jan. 21, 1890
406,656	Lotz, F	July 9, 1889	421,081	Mehren, J. F	Feb. 11, 1890
406,726	Groswith, H	July 9, 1889	421,169	Hewett, E. M. G	Feb. 11, 1890
406,997	Delany, P. B	July 16, 1889	421,801	Willms, C. and Leibig, G. A., jr	Feb. 18, 1890
407,781	Kookogey, W. P	July 30, 1889	422,534	Linville, J. H	Mar. 4, 1890
407,931	Hirlimann, C. J	July 30, 1889	422,925	D'Infreville, G	Mar. 11, 1890
408,138	Schoop, P	July 30, 1889	423,335	Moorthamers, L	Mar. 11, 1890
408,279	Williams, J. B	Aug. 6, 1889	423,594	Clark, M. M	Mar. 18, 1890
408,629	Kookogey, W. P	Aug. 6, 1889	423,959	Schmauser, T	Mar. 25, 1890
409,259	Ward, G. C	Aug. 20, 1889	425,135	Kookogey, W. P	Apr. 8, 1890
409,291	Kookogey, W. P	Aug. 20, 1889	425,335	Marx, F	Apr. 8, 1890
411,400	Thompson, W. C	Sept. 17, 1889	425,959	Renard, L. M. J. C. C	Apr. 15, 1890
413,345	Kookogey, W. P	Oct. 22, 1889	426,932	Gendron, F	Apr. 29, 1890
414,081	Roberts, I. L	Oct. 29, 1889	428,116	MacDonald, A. J	May 20, 1890
414,220	Hussey, C. A	Nov. 5, 1889	428,684	Mason, J. H	May 27, 1890
414,317	Hussey, C. A	Nov. 5, 1889	428,781	Nowotny, J. S	May 27, 1890
414,318	Hussey, C. A	Nov. 5, 1889	428,888	Burt, E. M	May 27, 1890
414,627	Barrett, J. A	Nov. 5, 1889	429,447	Hoencman, F. P. and W. A	June 3, 1890
415,345	Moreton, F	Nov. 19, 1889	429,596	Beattie, J., jr	June 10, 1890
415,593	Watson, J. E	Nov. 19, 1889	429,703	Siliceo, J., jr	June 10, 1890
415,963	Enholm, O. A	Nov. 26, 1889	429,895	Felt, G. H	June 10, 1890
415,975	Otto, G	Nov. 26, 1889	429,896	Felt, G. H	June 10, 1890
417,290	Sperry, E. A	Dec. 17, 1889	429,897	Felt, G. H	June 10, 1890
417,392	Mayer, E. L. and Liepmann, H	Dec. 17, 1889	429,898	Felt, G. H	June 10, 1890
417,436	Mayer, E. L. and Liepmann, H	Dec. 17, 1889	430,075	Hitchcock, C. A	June 10, 1890
417,458	Wolff, C. H	Dec. 17, 1889	430,279	Edison, T. A	June 17, 1890
417,814	Delany, P. B	Dec. 24, 1889	430,990	Davis, J. H	June 24, 1890

171. GENERATION.—72. BATTERIES—SECONDARY.

406,267	Currie, S. C. C	July 2, 1889	410,007	McLaughlin, J. F	Aug. 27, 1889
406,439	Griscom, W. W	July 9, 1889	410,037	Smith, F. H	Aug. 27, 1889
406,771	Riker, A. L	July 9, 1889	410,054	Waldron, C. F	Aug. 27, 1889
406,822	Dey, H. E	July 9, 1889	410,136	Carter, C. H	Aug. 27, 1889
406,916	Kitsee, I	July 16, 1889	410,680	Van Gestel, J. T	Sept. 10, 1889
406,969	Thompson, C. H	July 16, 1889	411,124	Huestis, F. W	Sept. 17, 1889
406,975	Van Gestel, J. T	July 16, 1889	411,370	Barrett, S. H	Sept. 17, 1889
408,002	Ernst, V. H	July 30, 1889	411,426	Dahl, O	Sept. 24, 1889
408,112	Kookogey, W. P	July 30, 1889	411,787	Currie, S. C. C	Oct. 1, 1889
408,287	Bottomo, T. D	Aug. 6, 1889	411,786	Currie, S. C. C	Oct. 1, 1889
408,367	Aldrich, N. B	Aug. 6, 1889	412,323	Currie, S. C. C	Oct. 8, 1889
408,666	McLaughlin, J. F	Aug. 6, 1889	412,345	Smith, W. F	Oct. 8, 1889
408,809	Meserole, A. V	Aug. 13, 1889	412,346	Smith, W. F	Oct. 8, 1889
408,986	Morris, H. G. and Salom, P. G	Aug. 13, 1889	412,639	Lyte, F. M	Oct. 8, 1889
409,106	Kookogey, W. P	Aug. 13, 1889	412,727	Carpenter, H. H	Oct. 15, 1889
409,178	Faure, C. A	Aug. 20, 1889	413,112	Tudor, H	Oct. 15, 1889
409,365	Mond, L. and Langer, C	Aug. 20, 1889	413,339	Eickemeyer, R	Oct. 22, 1889
409,366	Mond, L. and Langer, C	Aug. 20, 1889	414,438	Osburn, H. G	Nov. 5, 1889
409,448	Bradley, C. S	Aug. 20, 1889	414,953	Roberts, W	Nov. 12, 1889

171. GENERATION.—72. BATTERIES—SECONDARY—Continued.

No.	NAME.	DATE.	No.	NAME.	DATE.
415,327	Kennedy, P. and Diss, C. J	Nov. 19, 1889	422,301	Hartmann, C. J	Feb. 25, 1890
415,329	Payen, C	Nov. 19, 1889	422,308	Lyte, F. M	Feb. 25, 1890
415,331	Payen, C	Nov. 19, 1889	422,457	Sorley, C	Mar. 4, 1890
415,333	Payen, C	Nov. 19, 1889	422,504	Currie, S. C. C	Mar. 4, 1890
415,490	Allen, W. H	Nov. 19, 1889	422,505	Currie, S. C. C	Mar. 4, 1890
415,600	Wotton, J. A. and Polk, W. R., jr	Nov. 19, 1889	422,533	Kookogey, W. P	Mar. 4, 1890
415,936	Bradbury, J. Y. and Stone, F. J	Nov. 26, 1889	423,091	Sorley, C	Mar. 11, 1890
415,981	Smith, W. F	Nov. 26, 1889	423,310	Chamberlain, R. N. and J. C.	Mar. 11, 1890
416,126	Smith, W. F	Nov. 26, 1889	423,324	Johnson, W. A. and Smith, J. N	Mar. 11, 1890
416,299	Pumpelly, J. K	Dec. 3, 1889	424,152	Wardwell, H. H	Mar. 25, 1890
416,573	Covert, D'E. S. and Pumpelly, J. K.	Dec. 3, 1889	424,509	McLaughlin, J. F	Apr. 1, 1890
416,605	Hausen, M. L	Dec. 3, 1889	425,818	McLaughlin, J. F	Apr. 15, 1890
417,055	Logan, C. H	Dec. 10, 1889	425,819	McLaughlin, J. F	Apr. 15, 1890
417,088	Pumpelly, J. K	Dec. 10, 1889	425,902	Philippart, G	Apr. 15, 1890
417,158	Ernst, V. H	Dec. 10, 1889	425,957	Philippart, G	Apr. 15, 1890
418,140	Osburn, H. G	Dec. 24, 1889	425,999	Epstein, L	Apr. 22, 1890
418,483	Woolf, A. E	Dec. 31, 1889	426,724	Heyl, G. E	Apr. 29, 1890
418,700	Dey, H. E	Jan. 7, 1890	427,710	Smith, W. F	May 13, 1890
419,727	Sorley, C	Jan. 21, 1890	427,785	McLaughlin, J. F	May 13, 1890
419,728	Sorley, C	Jan. 21, 1890	427,789	Nevins, T. F	May 13, 1890
419,862	Mehren, J. F	Jan. 21, 1890	429,272	Hering, C	June 3, 1890
420,234	Johnson, G. A	Jan. 28, 1890	429,273	Hering, C	June 3, 1890
420,975	Sorley, C	Feb. 11, 1890	429,274	Hering, C	June 3, 1890
421,666	Carpenter, H. H	Feb. 18, 1890	429,912	Hering, C	June 10, 1890
421,916	Entz, J. B. and Phillips, W. A	Feb. 25, 1890	429,913	Hering, C	June 10, 1890
422,216	Hollingshead, W. B	Feb. 25, 1890	429,914	Hering, C	June 10, 1890
422,300	Hartmann, C. J	Feb. 25, 1890	11,047	Swan, J. W	Dec. 17, 1889

171. GENERATION.—74. BATTERIES—SECONDARY—APPLICATIONS.

406,354	Kookogey, W. P	July 2, 1889	415,766	Currie, S. C. C	Nov. 26, 1889
406,978	Wallace, T	July 16, 1889	418,701	Dey, H. E	Jan. 7, 1890
406,981	Amory, A. and R	July 16, 1889	418,702	Dey, H. E	Jan. 7, 1890
410,111	Kookogey, W. P	Aug. 27, 1889	418,703	Dey, H. E	Jan. 7, 1890
410,153	Currie, S. C. C	Sept. 3, 1889	418,748	Prescott, G. B., jr	Jan. 7, 1890
410,586	Foote, T. M	Sept. 10, 1889	420,906	Johnson, W. S	Feb. 4, 1890
411,301	Ries, E. E	Sept. 17, 1889	422,438	Pennoek, G. B	Mar. 4, 1890
414,943	Dewey, M. W	Nov. 12, 1889	424,339	McLaughlin, J. F	Mar. 25, 1890

171. GENERATION.—73. BATTERIES—THERMAL.

412,669	Roberts, W. S. De L. and Mol-lison, J. S.	Oct. 8, 1889	420,764	Bradley, C. S	Feb. 4, 1890
			425,568	Edelkamp, J	Apr. 15, 1890

171. GENERATION.—23. FRICTION GENERATORS.

410,053	Voss, R	Aug. 27, 1889	423,708	Tirmann, H	Mar. 18, 1890
416,662	Bartlett, S. H	Dec. 3, 1889			

171. GENERATION.—95. GALVANOMETERS.

408,157	Barrett, J. A	July 30, 1889	420,422	Warner, E. P	Jan. 28, 1890
409,207	Knowles, E. R	Aug. 20, 1889	422,672	Waring, J	Mar. 4, 1890
412,140	Thompson, W	Oct. 1, 1889	423,600	Frei, G. A	Mar. 18, 1890
412,354	Wood, J. J	Oct. 8, 1889	425,068	Garver, M. M	Apr. 8, 1890
413,292	Thomson, E	Oct. 22, 1889	425,069	Garver, M. M	Apr. 8, 1890
413,338	Eickemeyer, R	Oct. 22, 1889	426,065	Rae, F. B	Apr. 22, 1890
413,812	Ritchie, A. M	Oct. 29, 1889	426,499	Hicks, T. H	Apr. 29, 1890
414,076	Pfannkuehe, G	Oct. 29, 1889	426,992	Garver, M. M	Apr. 29, 1890
414,422	Lockwood, J. E	Nov. 5, 1889	427,022	Weston, E	Apr. 29, 1890
414,866	Mehren, J. F	Nov. 12, 1889	428,746	Colgate, A. E	May 27, 1890
416,654	Thompson, W	Dec. 3, 1889	429,887	Colgate, A. E	June 10, 1890
416,655	Thompson, W	Dec. 3, 1889	430,865	Leonard, H. W	June 24, 1890

171. GENERATION.—27. INDUCTION-COILS.

No.	NAME.	DATE.	No.	NAME.	DATE.
407,618	Slattery, M. M. M.-----	July 23, 1889	419,731	Stanley, L. T.-----	Jan. 21, 1890
409,714	Thomson, E.-----	Aug. 27, 1889	422,885	Hoyt, A. H.-----	Mar. 4, 1890
410,468	Thomson, E. and Rice, E. W., jr.-----	Sept. 3, 1889	423,616	Manker, C. W. and G. F.-----	Mar. 18, 1890
414,266	Thomson, E.-----	Nov. 5, 1889	423,617	Manker, C. W. and G. F.-----	Mar. 18, 1890
414,626	Barrett, J. A.-----	Nov. 5, 1889	426,563	Frankenberg, A. M.-----	Apr. 29, 1890
416,762	Thomson, E.-----	Dec. 10, 1889	428,574	Stanley, W., jr.-----	May 20, 1890
417,923	Kneuper, F. J.-----	Dec. 24, 1889			

171. GENERATION.—123. INDUCTORIUMS—TRANSFORMERS—ROTARY.

422,746	Von Dolivo-Dobrowolsky, M.-----	Mar. 4, 1890
---------	---------------------------------	--------------

171. GENERATION.—124. INDUCTORIUMS—TRANSFORMERS—STATIONARY.

415,749	Thomson, E.-----	Nov. 26, 1889	428,575	Stanley, W., jr.-----	May 20, 1890
420,396	Thomson, E.-----	Jan. 28, 1890	428,618	Lemp, H.-----	May 27, 1890
426,153	Wagemann, E.-----	Apr. 22, 1890	428,648	Thomson, E.-----	May 27, 1890
427,751	De Ferranti, S. Z.-----	May 13, 1890	429,583	Pfannkuche, G.-----	June 3, 1890

171. GENERATION.—33. MAGNETO-ELECTRIC.

406,415	Andrews, W. S. and Spencer, T.-----	July 9, 1889	415,697	Belding, W. S.-----	Nov. 26, 1889
406,429	Currie, S. C. C.-----	July 9, 1889	415,806	Belding, W. S.-----	Nov. 26, 1889
406,492	Wood, J. J.-----	July 9, 1889	416,013	Riker, A. L.-----	Nov. 26, 1889
406,599	Silvey, W. L.-----	July 9, 1889	416,240	Schmid, A.-----	Dec. 3, 1889
406,776	Schmid, A.-----	July 9, 1889	416,443	Cooley, W. H.-----	Dec. 3, 1889
406,777	Schmid, A.-----	July 9, 1889	416,720	Dalzell, J. A.-----	Dec. 10, 1889
406,858	Schmid, A.-----	July 9, 1889	417,794	Schmid, A. and Tesla, N.-----	Dec. 24, 1889
406,859	Schmid, A.-----	July 9, 1889	418,301	Wood, J. J.-----	Dec. 31, 1889
406,968	Tesla, N.-----	July 16, 1889	418,685	Claus, P. and Gengenbach, E.-----	Jan. 7, 1890
407,154	Bennett, E. H., jr.-----	July 16, 1889	418,853	Storey, I. E.-----	Jan. 7, 1890
407,225	Loomis, O. P.-----	July 16, 1889	419,661	Gutmann, L.-----	Jan. 21, 1890
407,761	Acheson, E. G.-----	July 30, 1889	420,924	Waterhouse, A. G.-----	Feb. 4, 1890
407,762	Acheson, E. G.-----	July 30, 1889	421,222	Alton, G. H. and Wakefield, W. O.-----	Feb. 11, 1890
407,763	Acheson, E. G.-----	July 30, 1889	421,320	Schmid, A. and Means, E. C.-----	Feb. 11, 1890
408,045	Riker, A. L.-----	July 30, 1889	421,479	Brace, De W. B.-----	Feb. 18, 1890
408,206	Boissier, H. R.-----	Aug. 6, 1889	421,967	Pfatischer, M.-----	Feb. 25, 1890
408,265	Short, S. H.-----	Aug. 6, 1889	422,265	Van Depoele, C. J.-----	Feb. 25, 1890
408,403	De Ferranti, S. Z.-----	Aug. 6, 1889	422,295	Cooper, W. B.-----	Feb. 25, 1890
408,404	De Ferranti, S. Z.-----	Aug. 6, 1889	422,419	Jenney, C. D.-----	Mar. 4, 1890
408,763	Van Gestel, J. T.-----	Aug. 13, 1889	422,511	Eickemeyer, R.-----	Mar. 4, 1890
409,349	De Ferranti, S. Z.-----	Aug. 20, 1889	422,550	Thomson, E.-----	Mar. 4, 1890
409,463	Higham, D.-----	Aug. 20, 1889	422,631	Wray, J. C.-----	Mar. 4, 1890
409,646	McLellan, J. M.-----	Aug. 20, 1889	422,863	Washburn, G. A.-----	Mar. 4, 1890
410,265	Blackwell, F. O.-----	Sept. 3, 1889	422,999	Thomson, E. and Rohrer, A. L.-----	Mar. 11, 1890
410,592	Johnson, J. R.-----	Sept. 10, 1889	423,026	Cohen, R. L.-----	Mar. 11, 1890
410,556	Statter, J. G.-----	Sept. 10, 1889	423,309	Chamberlain, J. C.-----	Mar. 11, 1890
410,670	Jenney, C. D.-----	Sept. 10, 1889	423,912	Diehl, P.-----	Mar. 25, 1890
410,965	Fitch, A. S.-----	Sept. 10, 1889	423,991	De Ferranti, S. Z.-----	Mar. 25, 1890
410,966	Fitch, A. S.-----	Sept. 10, 1889	424,065	Jenney, C. D.-----	Mar. 25, 1890
411,629	Winkler, C. F.-----	Sept. 24, 1889	424,406	Crane, W. F. D.-----	Mar. 25, 1890
411,930	Rice, E. W., jr. and Rohrer, A. L.-----	Oct. 1, 1889	425,435	La Roche, F. A.-----	Apr. 15, 1890
411,950	Atwater, A. S.-----	Oct. 1, 1889	425,763	Edison, T. A.-----	Apr. 15, 1890
412,349	Winkler, C. F.-----	Oct. 8, 1889	426,343	Watson, J. A.-----	Apr. 22, 1890
412,350	Winkler, C. F.-----	Oct. 8, 1889	426,348	Wightman, M. J. and Thomson, E.-----	Apr. 22, 1890
412,351	Winkler, C. F.-----	Oct. 8, 1889	426,471	Rice, E. W., jr.-----	Apr. 29, 1890
412,352	Winkler, C. F.-----	Oct. 8, 1889	426,576	Wenström, J.-----	Apr. 29, 1890
412,353	Winkler, C. F.-----	Oct. 8, 1889	427,259	Forbes, G.-----	May 6, 1890
412,354	Kingdon, J. A.-----	Oct. 15, 1889	427,294	Brace, De W. B.-----	May 6, 1890
412,355	Kingdon, J. A.-----	Oct. 15, 1889	427,405	Dewey, M.-----	May 6, 1890
412,933	Shallenberger, O. B.-----	Oct. 15, 1889	427,674	Daft, L.-----	May 13, 1890
413,008	Zipernowsky, C.-----	Oct. 15, 1889	428,038	Bowen, E. H.-----	May 13, 1890
413,148	Pfannkuche, G.-----	Oct. 15, 1889	428,073	Brown, L. V.-----	May 20, 1890
413,337	Eickemeyer, R.-----	Oct. 22, 1889	428,289	Schmid, A.-----	May 20, 1890
413,363	Eickemeyer, R.-----	Oct. 22, 1889	428,330	Croasdale, E.-----	May 20, 1890
414,245	Pfannkuche, G.-----	Nov. 5, 1889	428,735	Weller, F. A.-----	May 27, 1890
414,659	Seafert, W.-----	Nov. 5, 1889	428,742	Brush, C. F.-----	May 27, 1890
414,900	Geisenhöner, H.-----	Nov. 12, 1889	428,743	Brush, C. F.-----	May 27, 1890
415,190	Daniels, T. E., jr.-----	Nov. 19, 1889	429,490	Wagemann, E.-----	June 3, 1890
415,363	Loomis, F. F.-----	Nov. 19, 1889	429,736	Pfund, R.-----	June 10, 1890
415,635	Belding, W. S.-----	Nov. 26, 1889	430,320	Rice, E. W., jr.-----	June 17, 1890
415,696	Belding, W. S.-----	Nov. 26, 1889	431,018	Edison, T. A.-----	June 24, 1890

171. GENERATION.—76. MAGNETO-ELECTRIC—HAND-MACHINES.

No.	NAME.	DATE.	No.	NAME.	DATE.
407,327	Buell, C. E -----	July 23, 1889	418,120	Gillett, W -----	Dec. 24, 1889
410,964	Fitch, A. S -----	Sept. 10, 1889	427,122	Scribner, C. E -----	May 6, 1890

171. GENERATION.—34. METERS.

406,678	Walker, G. W -----	July 9, 1889	419,367	Shallenberger, O. B -----	Jan. 14, 1890
406,824	Edison, T. A -----	July 9, 1889	420,214	Smith, W. F -----	Jan. 28, 1890
406,825	Edison, T. A -----	July 9, 1889	420,762	Bishop, J. D -----	Feb. 4, 1890
407,414	McKinney, W -----	July 23, 1889	423,210	Blathy, O. T -----	Mar. 11, 1890
407,619	Slattery, M. M. M -----	July 23, 1889	424,338	McKinney, W -----	Mar. 25, 1890
408,016	Knowles, E. R -----	July 30, 1889	424,401	Bagby, W. J -----	Mar. 25, 1890
408,017	Knowles, E. R -----	July 30, 1889	424,891	Lowrie, W., Hall, C. J. and Kollé, H. W. -----	Apr. 1, 1890
408,018	Knowles, E. R -----	July 30, 1889	425,269	Thompson, M. E -----	Apr. 8, 1890
408,295	De Ferranti, S. Z -----	Aug. 6, 1889	425,270	Thompson, M. E -----	Apr. 8, 1890
410,860	Slattery, M. M. M -----	Sept. 10, 1889	425,579	Popp, V -----	Apr. 15, 1890
411,042	Kolle, H. W -----	Sept. 17, 1889	425,760	Edison, T. A -----	Apr. 15, 1890
413,038	Douglas, W. H -----	Oct. 15, 1889	426,335	Shallenberger, O. B -----	Apr. 22, 1890
414,339	Spaulding, H. C -----	Nov. 5, 1889	427,489	Westinghouse, G., jr -----	May 6, 1890
414,595	Shallenberger, O. B -----	Nov. 5, 1889	427,748	Currie, S. C. C -----	May 13, 1890
415,491	Bates, P. S -----	Nov. 19, 1889	427,749	Currie, S. C. C -----	May 13, 1890
415,577	Siemens, E. W -----	Nov. 19, 1889	428,084	Frager, A -----	May 20, 1890
415,747	Thomson, E -----	Nov. 26, 1889	428,280	Mehren, J. F -----	May 20, 1890
415,748	Thomson, E -----	Nov. 26, 1889	428,290	Von Siemens, E. W -----	May 20, 1890
416,339	Lemp, H -----	Dec. 3, 1889	428,633	Rice, E. W., jr -----	May 27, 1890
416,350	Thomson, E -----	Dec. 3, 1889	428,649	Thomson, E -----	May 27, 1890
416,604	Hansen, M. L -----	Dec. 3, 1889	429,751	Barnard, J. H -----	June 10, 1890
418,472	Pratt, C. A -----	Dec. 31, 1889	430,432	Oulton, J. and Edmondson, J -----	June 17, 1890
418,559	Frager, A. J -----	Dec. 31, 1889	430,551	Wade, G. H -----	June 17, 1890
419,264	Kennelly, A. E -----	Jan. 14, 1890			

171. GENERATION.—125. PYRO-MAGNETO—ELECTRIC DEVICES.

428,057	Tesla, N -----	May 13, 1890
---------	----------------	--------------

171. GENERATION.—40. REGULATORS.

406,493	Wood, J. J -----	July 9, 1889	420,138	Wood, J. J -----	Jan. 28, 1890
406,494	Wood, J. J -----	July 9, 1889	420,398	Waterhouse, A. G -----	Jan. 28, 1890
406,961	Schlesinger, W. M -----	July 16, 1889	420,469	Serrell, L. W. and Lufkin, H. L. -----	Feb. 4, 1890
407,014	Kelly, J. F. and Brangs, P. H. -----	July 16, 1889	420,882	Lemp, H. and Wightman, M. J. -----	Feb. 4, 1890
407,293	Fligham, D -----	July 16, 1889	421,048	Heymann, E. and F. W. -----	Feb. 11, 1890
407,875	Pfannkuche, G -----	July 30, 1889	421,053	Nutting, S. E -----	Feb. 11, 1890
408,205	Boissier, H. R -----	Aug. 6, 1889	421,195	Ross, F. and Franzen, A -----	Feb. 11, 1890
408,333	Whittingham, G. H -----	Aug. 6, 1889	422,862	Washburn, G. A -----	Mar. 4, 1890
410,170	Loomis, O. P -----	Sept. 3, 1889	422,975	Rice, E. W., jr -----	Mar. 11, 1890
410,663	Bradford, J. M -----	Sept. 10, 1889	423,029	Currie, S. C. C -----	Mar. 11, 1890
410,896	Hoffmann, R -----	Sept. 10, 1889	423,897	Baxter, W., jr -----	Mar. 25, 1890
411,551	Harris, L. S -----	Sept. 24, 1889	423,909	Cooley, H. W -----	Mar. 25, 1890
411,782	Card, G. F -----	Oct. 1, 1889	424,595	Bergmann, S. and Scott, G. B. -----	Apr. 1, 1890
411,783	Card, G. F -----	Oct. 1, 1889	424,665	Young, C. G -----	Apr. 1, 1890
412,567	Tracy, P. J -----	Oct. 8, 1889	426,108	Clark, E. P -----	Apr. 22, 1890
412,700	Elkins, W. H -----	Oct. 8, 1889	426,109	Clark, E. P -----	Apr. 22, 1890
412,928	Macrae, R -----	Oct. 15, 1889	426,110	Clark, E. P -----	Apr. 22, 1890
413,279	Hochhausen, W -----	Oct. 22, 1889	426,570	Peel, W. T -----	Apr. 29, 1890
413,280	Hochhausen, W -----	Oct. 22, 1889	426,573	Stanley, W., jr -----	Apr. 29, 1890
413,984	Thone, F -----	Oct. 29, 1889	426,574	Stanley, W., jr -----	Apr. 29, 1890
414,043	Gutmann, L -----	Oct. 29, 1889	426,699	Wood, J. J -----	Apr. 29, 1890
414,052	Immich, M -----	Oct. 29, 1889	427,163	Elkins, W. H -----	May 6, 1890
414,191	Conant, H. J -----	Nov. 5, 1889	427,164	Elkins, W. H -----	May 6, 1890
415,487	Whittingham, G. H -----	Nov. 19, 1889	427,530	Warner, E. P -----	May 6, 1890
415,641	Jaeger, C. L -----	Nov. 19, 1889	428,317	Pfannkuche, G -----	May 20, 1890
416,169	Keith, N. S -----	Dec. 3, 1889	428,705	Thomson, E -----	May 27, 1890
416,746	Rice, E. W., jr -----	Dec. 10, 1889	428,732	Sprague, F. J -----	May 27, 1890
417,089	Rae, F. B -----	Dec. 10, 1889	429,333	Bradford, J. M -----	June 3, 1890
417,487	Jenuey, C. D -----	Dec. 17, 1889	429,825	Wagemann, E -----	June 10, 1890
418,302	Wood, J. J -----	Dec. 31, 1889	430,327	Thomson, E. and Rice, E. W., jr -----	June 17, 1890
418,303	Wood, J. J -----	Dec. 31, 1889	430,634	Elkins, W. H -----	June 24, 1890
419,740	Wagner, F. C -----	Jan. 21, 1890	430,868	Mailoux, C. O -----	June 24, 1890
420,117	Sperry, E. A -----	Jan. 28, 1890			

171. GENERATION.—119. REGULATORS—ALTERNATING.

No.	NAME.	DATE.	No.	NAME.	DATE.
412,185	Hopkinson, J. and E.-----	Oct. 1, 1889	423,553	Gutmann, L.-----	Mar. 18, 1890
412,186	Hopkinson, J. and E.-----	Oct. 1, 1889	427,571	Heymann, E. and F. W.-----	May 13, 1890
418,659	Stanley, W., Jr.-----	Dec. 31, 1889	428,620	Lemp, H. and Moody, N. S.-----	May 27, 1890

171. GENERATION.—97. SYSTEMS OF DISTRIBUTION.

407,204	Higham, D.-----	July 16, 1889	419,660	Gutmann, L.-----	Jan. 21, 1890
407,294	Kennedy, R.-----	July 16, 1889	419,662	Gutmann, L.-----	Jan. 21, 1890
407,485	Lighthipe, J. A.-----	July 23, 1889	419,663	Gutmann, L.-----	Jan. 21, 1890
408,513	Perry, F. L.-----	Aug. 6, 1889	421,208	Thomson, E.-----	Feb. 11, 1890
409,182	De Ferranti, S. Z.-----	Aug. 20, 1889	424,606	Gutmann, L.-----	Apr. 1, 1890
409,565	De Ferranti, S. Z.-----	Aug. 20, 1889	425,470	Thomson, E.-----	Apr. 15, 1890
409,566	De Ferranti, S. Z.-----	Aug. 20, 1889	426,127	Kintner, C. J.-----	Apr. 22, 1890
413,293	Thomson, E. and Rice, E. W., Jr.-----	Oct. 22, 1889	427,515	Hunter, R. M.-----	May 6, 1890
413,353	Tesla, N.-----	Oct. 22, 1889	428,647	Thomson, E.-----	May 27, 1890
413,810	Paget, L.-----	Oct. 29, 1889	428,651	Thomson, E.-----	May 27, 1890
414,541	Hopkinson, J.-----	Nov. 5, 1889	430,060	Bentley, E. M.-----	June 10, 1890
417,668	Dihlmann, C.-----	Dec. 17, 1889	430,688	Richards, W. S.-----	June 24, 1890
418,912	Dewey, M. W.-----	Jan. 7, 1890	11,031	Kennedy, R.-----	Sept. 24, 1889

172. MOTIVE POWER.—9. CAR BRAKES.

414,418	Leonard, H. W.-----	Nov. 5, 1889	418,402	Darling, W. H.-----	Dec. 31, 1889
414,996	Ries, E. E.-----	Nov. 12, 1889	420,693	McElroy, D. S.-----	Feb. 4, 1890
415,338	Backus, E.-----	Nov. 19, 1889			

172. MOTIVE POWER.—15. DENTAL INSTRUMENTS.

407,950	Cooke, A. R.-----	July 30, 1889	427,070	Gibbs, W. E.-----	May 6, 1890
409,437	Vernette, F.-----	Aug. 20, 1889			

172. MOTIVE POWER.—75. LOCOMOTION.

406,391	Dibble, H. D.-----	July 2, 1889	408,754	Salisbury, W. S.-----	Aug. 13, 1889
406,420	Blackwell, F. O.-----	July 9, 1889	408,855	Schlesinger, W. M.-----	Aug. 13, 1889
406,421	Blackwell, F. O.-----	July 9, 1889	408,984	Love, J. C.-----	Aug. 13, 1889
406,600	Sprague, F. J.-----	July 9, 1889	409,104	Jennings, B.-----	Aug. 13, 1889
406,743	Knight, W. H.-----	July 9, 1889	409,116	Patton, W. H.-----	Aug. 13, 1889
406,797	Van Depoele, C. J.-----	July 9, 1889	409,156	Van Depoele, C. J.-----	Aug. 13, 1889
406,798	Van Depoele, C. J.-----	July 9, 1889	409,237	Ries, E. E.-----	Aug. 20, 1889
406,803	Weems, D. G.-----	July 9, 1889	409,603	Dickson, J. G. and R. and Snyder, P.-----	Aug. 20, 1889
406,804	Weems, D. G.-----	July 9, 1889			
406,805	Weems, D. G.-----	July 9, 1889	409,752	McElroy, W. J.-----	Aug. 27, 1889
406,806	Weems, D. G.-----	July 9, 1889	409,756	Ries, E. E.-----	Aug. 27, 1889
406,833	Griscom, W. W.-----	July 9, 1889	409,757	Ries, E. E.-----	Aug. 27, 1889
406,917	Knight, W. H.-----	July 16, 1889	409,775	De Ferranti, S. Z.-----	Aug. 27, 1889
407,086	Main, W.-----	July 16, 1889	409,815	Allen, R. N.-----	Aug. 27, 1889
407,093	Main, W.-----	July 16, 1889	410,049	Van Gestel, J. T.-----	Aug. 27, 1889
407,094	Main, W.-----	July 16, 1889	410,150	Chase, H. A.-----	Sept. 3, 1889
407,095	Main, W.-----	July 16, 1889	410,264	Blackwell, F. O.-----	Sept. 3, 1889
407,188	Field, S. D.-----	July 16, 1889	410,498	Daft, L.-----	Sept. 3, 1889
407,470	Cutler, H. H.-----	July 23, 1889	411,313	Wightman, M. J.-----	Sept. 17, 1889
407,496	Short, S. H.-----	July 23, 1889	411,314	Wightman, M. J.-----	Sept. 17, 1889
407,689	Riker, A. L.-----	July 23, 1889	411,496	Fraley, G. B.-----	Sept. 24, 1889
407,745	Short, S. H.-----	July 23, 1889	411,613	Riker, A. L.-----	Sept. 24, 1889
407,749	Van Depoele, C. J.-----	July 23, 1889	411,989	Jackson, C. A.-----	Oct. 1, 1889
408,231	Griscom, W. W.-----	Aug. 6, 1889	412,155	Anderson, A.-----	Oct. 1, 1889
408,232	Griscom, W. W.-----	Aug. 6, 1889	412,157	Andersen, A.-----	Oct. 1, 1889
408,334	Adams, T. E.-----	Aug. 6, 1889	412,476	Cushing, J. P.-----	Oct. 8, 1889
408,503	Morley, J. H.-----	Aug. 6, 1889	412,528	McDougall, W. M.-----	Oct. 8, 1889
408,544	Sprague, F. J.-----	Aug. 6, 1889	412,605	Daft, L.-----	Oct. 8, 1889
408,590	Currie, S. C. C.-----	Aug. 6, 1889	412,666	Reno, J. W.-----	Oct. 8, 1889
408,638	Van Depoele, C. J.-----	Aug. 6, 1889	413,151	Sprague, F. J.-----	Oct. 15, 1889
408,639	Van Depoele, C. J.-----	Aug. 6, 1889	413,287	Mitchell, J.-----	Oct. 22, 1889
408,640	Van Depoele, C. J.-----	Aug. 6, 1889	413,294	Thomson, E.-----	Oct. 22, 1889
408,753	Salisbury, W. S.-----	Aug. 13, 1889	413,604	Hunter, R. M.-----	Oct. 22, 1889

172. MOTIVE POWER.—75. LOCOMOTION—Continued.

No.	NAME.	DATE.	No.	NAME.	DATE.
413,637	Wheless, M.	Oct. 22, 1889	424,110	Harris, S.	Mar. 25, 1890
413,731	Poole, C. P.	Oct. 29, 1889	424,206	Hunter, R. M.	Mar. 25, 1890
413,818	Adams, T. E.	Oct. 29, 1889	424,207	Hunter, R. M.	Mar. 25, 1890
414,049	Hunter, R. M.	Oct. 29, 1889	424,298	Henry, J. C.	Mar. 25, 1890
414,050	Hunter, R. M.	Oct. 29, 1889	424,340	McLaughlin, J. F.	Mar. 25, 1890
414,172	Sprague, F. J. and O'Shaughnessy, P. F.	Oct. 29, 1889	424,364	Slentz, E. P. and McGrew, J. B.	Mar. 25, 1890
414,289	Christy, W.	Nov. 5, 1889	424,374	Stephenson, J.	Mar. 25, 1890
414,583	Reams, J. M.	Nov. 5, 1889	424,380	Van Depoele, C. J.	Mar. 25, 1890
414,609	Van Depoele, C. J.	Nov. 5, 1889	424,381	Van Depoele, C. J.	Mar. 25, 1890
415,070	Short, S. H.	Nov. 12, 1889	424,436	Sprague, F. J.	Mar. 25, 1890
415,165	Finney, J. R.	Nov. 12, 1889	424,607	Hunter, R. M.	Apr. 1, 1890
415,710	Fowler, F. E.	Nov. 26, 1889	424,695	Van Depoele, C. J.	Apr. 1, 1890
416,289	Ellinwood, A. E.	Dec. 3, 1889	424,699	Bentley, E. M.	Apr. 1, 1890
416,366	Johnson, T. L.	Dec. 3, 1889	424,810	McLaughlin, J. F.	Apr. 1, 1890
416,920	Jenkins, W. F.	Dec. 10, 1889	424,817	Patton, W. H.	Apr. 1, 1890
417,095	Saville, J. J. and Winspear, J. H.	Dec. 10, 1889	424,818	Perret, F. A.	Apr. 1, 1890
417,120	Van Depoele, C. J.	Dec. 10, 1889	424,845	Bentley, E. M.	Apr. 1, 1890
417,121	Van Depoele, C. J.	Dec. 10, 1889	424,848	Blackwell, F. O.	Apr. 1, 1890
417,122	Van Depoele, C. J.	Dec. 10, 1889	424,887	Knight, W. H.	Apr. 1, 1890
417,259	Main, W.	Dec. 17, 1889	424,888	Knight, W. H.	Apr. 1, 1890
417,338	Ries, E. E.	Dec. 17, 1889	424,910	Van Depoele, C. J.	Apr. 1, 1890
417,654	Van Depoele, C. J.	Dec. 17, 1889	424,911	Van Depoele, C. J.	Apr. 1, 1890
417,747	Short, S. H.	Dec. 24, 1889	424,928	Hunter, R. M.	Apr. 1, 1890
417,974	Blackwell, F. O.	Dec. 24, 1889	425,038	Maynadier, J. E.	Apr. 8, 1890
418,373	Libbey, H. W.	Dec. 31, 1889	425,076	Hunter, R. M.	Apr. 8, 1890
418,704	Duggan, J. A.	Jan. 7, 1890	425,077	Hunter, R. M.	Apr. 8, 1890
418,718	Henning, B. S.	Jan. 7, 1890	425,101	Kilian, C. J.	Apr. 8, 1890
418,843	Johnson, D. E.	Jan. 7, 1890	425,107	Penney, H. E.	Apr. 8, 1890
418,856	Storey, I. E.	Jan. 7, 1890	425,388	Odell, J. B.	Apr. 8, 1890
418,893	Hunter, R. M.	Jan. 7, 1890	425,488	Blackwell, F. O.	Apr. 15, 1890
419,059	Niles, H. B.	Jan. 7, 1890	425,489	Blackwell, F. O.	Apr. 15, 1890
419,094	Wynne, F.	Jan. 7, 1890	425,493	Cleveland, W. B.	Apr. 15, 1890
419,166	Williams, J. T.	Jan. 7, 1890	425,627	Peckham, E.	Apr. 15, 1890
419,308	Black, B. J.	Jan. 14, 1890	425,640	Thomson, E.	Apr. 15, 1890
419,309	Black, B. J. and Jenkins, W. F.	Jan. 14, 1890	425,694	Porter, W. and George, H.	Apr. 15, 1890
419,314	Cade, B.	Jan. 14, 1890	425,720	Wheeler, F. C.	Apr. 15, 1890
419,588	Kitsee, I.	Jan. 14, 1890	425,767	Evans, T. A.	Apr. 15, 1890
419,618	Adams, T. E.	Jan. 21, 1890	425,866	Dewey, M. W.	Apr. 15, 1890
419,673	Hicks, T. H.	Jan. 21, 1890	425,883	Hunter, R. M.	Apr. 15, 1890
419,709	Richter, C.	Jan. 21, 1890	425,911	Sill, R. V. R.	Apr. 15, 1890
419,753	Darling, W. H.	Jan. 21, 1890	425,912	Sill, R. V. R.	Apr. 15, 1890
419,771	Hawkesworth, R. W.	Jan. 21, 1890	425,950	Knight, W. H.	Apr. 15, 1890
419,841	Dewey, M. W.	Jan. 21, 1890	425,964	Weems, D. G.	Apr. 15, 1890
420,101	Reno, J. W.	Jan. 28, 1890	425,966	Weems, D. G.	Apr. 15, 1890
420,804	Johnson, D. E.	Feb. 4, 1890	426,064	Rae, F. B.	Apr. 22, 1890
421,304	Rae, F. B.	Feb. 11, 1890	426,066	Rae, F. B.	Apr. 22, 1890
421,305	Rae, F. B.	Feb. 11, 1890	426,102	Blackwell, F. O.	Apr. 22, 1890
421,398	Griffin, P. H.	Feb. 18, 1890	426,269	Gutmann, L.	Apr. 22, 1890
421,464	Wirt, H. C.	Feb. 18, 1890	426,379	Henry, J. C.	Apr. 22, 1890
421,535	Wheeler, F.	Feb. 18, 1890	426,382	Hunter, R. M.	Apr. 22, 1890
421,677	Cummingham, J. H.	Feb. 18, 1890	426,436	Corliss, G. F.	Apr. 29, 1890
421,887	Adair, J.	Feb. 25, 1890	426,580	Bentley, E. M.	Apr. 29, 1890
422,096	Short, S. H.	Feb. 25, 1890	426,452	Kuehule, J.	Apr. 29, 1890
422,164	Stearns, C. K. and Wheeler, G. K.	Feb. 25, 1890	426,650	Thompson, R. W.	Apr. 29, 1890
422,266	Van Depoele, C. J.	Feb. 25, 1890	426,657	Brill, J. A.	Apr. 29, 1890
422,339	Farnham, I. H.	Feb. 25, 1890	426,658	Brill, J. A.	Apr. 29, 1890
422,445	Priest, E. D.	Mar. 4, 1890	426,708	Brill, J. A.	Apr. 29, 1890
422,645	Short, S. H.	Mar. 4, 1890	427,221	Boynton, E. M.	May 6, 1890
422,976	Roberts, H. P.	Mar. 11, 1890	427,333	Lewis, W. F.	May 6, 1890
423,004	Vogler, W.	Mar. 11, 1890	427,459	Chamberlain, J. C.	May 6, 1890
423,005	Vogler, W.	Mar. 11, 1890	427,569	Harriman, W. F.	May 13, 1890
423,391	Rae, F. B.	Mar. 11, 1890	427,589	Marks, H. A.	May 13, 1890
423,400	Voss, D. C.	Mar. 11, 1890	427,725	Bentley, E. M.	May 13, 1890
423,468	Campbell, G. G.	Mar. 18, 1890	427,726	Bentley, E. M.	May 13, 1890
423,495	Seymour, H. A.	Mar. 18, 1890	428,071	Brown, H. P.	May 20, 1890
423,527	Miller, G. E.	Mar. 18, 1890	428,072	Brown, H. P.	May 20, 1890
423,552	Gutmann, L.	Mar. 18, 1890	428,098	Hunter, R. M.	May 20, 1890
423,874	Lineff, A. L.	Mar. 18, 1890	428,136	Rae, F. B.	May 20, 1890
424,070	Mansfield, G. W.	Mar. 25, 1890	428,211	Hunter, R. M.	May 20, 1890
424,082	Thompson, W.	Mar. 25, 1890	428,499	Legg, J. B. and Nile, J.	May 20, 1890
			429,277	Lineff, A. L.	June 3, 1890

172. MOTIVE POWER.—36. MOTORS.

No.	NAME.	DATE.	No.	NAME.	DATE.
406,874	Buckley, J.-----	July 16, 1889	422,148	Parkhurst, E. B.-----	Feb. 25, 1890
406,922	Mansfield, G. W.-----	July 16, 1889	422,149	Parkhurst, E. B.-----	Feb. 25, 1890
407,272	Woolley, L. G.-----	July 16, 1889	422,556	Walter, H. E.-----	Mar. 4, 1890
408,910	Card, G. F.-----	Aug. 13, 1889	422,911	Butterfield, H. R.-----	Mar. 11, 1890
411,030	Hirlimann, C. J.-----	Sept. 17, 1889	423,462	Whittingham, G. H.-----	Mar. 18, 1890
411,833	Peck, C. C.-----	Oct. 1, 1889	423,891	Barriett, S. L.-----	Mar. 18, 1890
411,982	Diehl, P.-----	Oct. 1, 1889	423,975	Wightman, M. J.-----	Mar. 25, 1890
411,983	Diehl, P.-----	Oct. 1, 1889	424,535	Bock, L., jr.-----	Apr. 1, 1890
412,177	Groswith, H.-----	Oct. 1, 1889	425,106	Nichols, E. I.-----	Apr. 8, 1890
413,512	Hull, R. C.-----	Oct. 22, 1889	425,991	Davis, F. E. and Scott, J., jr.-----	Apr. 22, 1890
414,757	Diehl, P.-----	Nov. 12, 1889	425,995	Diehl, P.-----	Apr. 22, 1890
414,758	Diehl, P.-----	Nov. 12, 1889	426,380	Henry, J. C.-----	Apr. 22, 1890
415,350	Pullman, H. B.-----	Nov. 19, 1889	427,235	Ingraham, A. A.-----	May 6, 1890
417,474	Diehl, P.-----	Dec. 17, 1889	427,503	Duncan, L.-----	May 6, 1890
418,678	Blades, H. H.-----	Jan. 7, 1890	428,169	Knight, W. H.-----	May 20, 1890
419,245	Currie, S. C. C.-----	Jan. 14, 1890	428,454	Chapman, W. H.-----	May 20, 1890
419,808	White, Le R. S.-----	Jan. 21, 1890	428,481	Groswith, H.-----	May 20, 1890
421,090	Anthony, W. A.-----	Feb. 11, 1890	428,782	Potter, S. M. and Morgan, H. E.-----	May 27, 1890
421,790	Walsh, P. B.-----	Feb. 18, 1890	431,020	Brown, P.-----	June 24, 1890
421,911	Diehl, P.-----	Feb. 25, 1890			

172. MOTIVE POWER.—120. MOTORS—ALTERNATING.

407,844	Thomson, E.-----	July 30, 1889	418,654	Patten, F. J.-----	Dec. 31, 1889
408,641	Van Depoele, C. J.-----	Aug. 6, 1889	419,664	Gutmann, L.-----	Jan. 21, 1890
408,642	Van Depoele, C. J.-----	Aug. 6, 1889	420,079	Marvin, H. N.-----	Jan. 28, 1890
410,987	Patten, F. J.-----	Sept. 10, 1889	421,193	Rice, E. W., jr.-----	Feb. 11, 1890
410,988	Patten, F. J.-----	Sept. 10, 1889	422,755	De Ferranti, S. Z.-----	Mar. 4, 1890
411,840	Taylor, R. S. and Slaterry, M. M. M.-----	Oct. 1, 1889	424,036	Tesla, N.-----	Mar. 25, 1890
413,085	Patten, F. J.-----	Oct. 15, 1889	424,734	Smith, L. T.-----	Apr. 1, 1890
413,986	Van Depoele, C. J.-----	Oct. 29, 1889	425,923	Zipernowsky, C., Déri, M. and Bláthy, O. T.-----	Apr. 15, 1890
416,191	Tesla, N.-----	Dec. 3, 1889			
416,192	Tesla, N.-----	Dec. 3, 1889	427,978	Von Dolivo-Dobrowolsky, M.-----	May 13, 1890
416,193	Tesla, N.-----	Dec. 3, 1889	428,650	Thomson, E.-----	May 27, 1890
416,194	Tesla, N.-----	Dec. 3, 1889	429,094	Hunter, R. M.-----	May 27, 1890
416,195	Tesla, N.-----	Dec. 3, 1889	429,109	Anderson, F.-----	June 3, 1890
418,248	Tesla, N.-----	Dec. 31, 1889	430,328	Thomson, E. and Rice, E. W., jr.-----	June 17, 1890

172. MOTIVE POWER.—126. MOTORS—RECIPROCATING.

422,201	Fryer, G. G.-----				Feb. 25, 1890
---------	-------------------	--	--	--	---------------

172. MOTIVE POWER.—83. TRANSMISSION OF POWER.

409,449	Bradley, C. S.-----	Aug. 20, 1889	422,855	Van Depoele, C. J.-----	Mar. 4, 1890
409,450	Bradley, C. S.-----	Aug. 20, 1889	422,856	Van Depoele, C. J.-----	Mar. 4, 1890
412,925	Kinsman, F. E.-----	Oct. 15, 1889	422,857	Van Depoele, C. J.-----	Mar. 4, 1890
412,932	Shallenberger, O. B.-----	Oct. 15, 1889	422,858	Van Depoele, C. J.-----	Mar. 4, 1890
418,652	Patten, F. J.-----	Dec. 31, 1889	422,859	Van Depoele, C. J.-----	Mar. 4, 1890
418,653	Patten, F. J.-----	Dec. 31, 1889	422,860	Van Depoele, C. J.-----	Mar. 4, 1890
418,655	Patten, F. J.-----	Dec. 31, 1889	429,729	Marvin, H. N.-----	June 10, 1890
419,861	Marvin, H. N.-----	Jan. 21, 1890	429,730	Marvin, H. N.-----	June 10, 1890
420,080	Marvin, H. N.-----	Jan. 28, 1890	429,731	Marvin, H. N.-----	June 10, 1890
420,816	Marvin, H. N.-----	Feb. 4, 1890	429,732	Marvin, H. N.-----	June 10, 1890

173. CONDUCTORS.—13. CONDUCTORS.

406,284	Johns, H. W., jr.-----	July 2, 1889	424,575	Reed, T. S.-----	Apr. 1, 1890
408,901	Snedekor, C. T.-----	Aug. 13, 1889	424,751	Barrett, J. A.-----	Apr. 1, 1890
409,181	De Ferranti, S. Z.-----	Aug. 20, 1889	425,917	Tortora, E.-----	Apr. 15, 1890
410,953	Brooks, D., jr.-----	Sept. 10, 1889	429,304	Cobb, H. B.-----	June 3, 1890
419,923	Carpenter, H. H.-----	Jan. 21, 1890	429,305	Cobb, H. B.-----	June 3, 1890
420,638	Conner, W. A.-----	Feb. 4, 1890	429,306	Cobb, H. B.-----	June 3, 1890
421,781	Stoughton, J. A.-----	Feb. 18, 1890	429,815	Reilly, J. C.-----	June 10, 1890
421,968	Phillips, E. F.-----	Feb. 25, 1890	430,974	Sanche, H.-----	June 24, 1890
423,449	Seely, J. A.-----	Mar. 18, 1890			

173. CONDUCTORS.—94. CONDUCTORS—LEAD-COVERED.

No.	NAME.	DATE.	No.	NAME.	DATE.
408,374	Cobb, H. B -----	Aug. 6, 1889	410,410	Goodwin, C. Q -----	Sept. 3, 1889
408,375	Cobb, H. B -----	Aug. 6, 1889	415,262	Wetmore, J. A -----	Nov. 19, 1889
408,376	Cobb, H. B -----	Aug. 6, 1889	428,055	Patterson, W. R -----	May 13, 1890
408,377	Cobb, H. B -----	Aug. 6, 1889	428,745	Candee, W. L -----	May 27, 1890
408,574	Brooks, D., jr -----	Aug. 6, 1889	429,255	Bishop, J. D -----	June 3, 1890
409,375	Simons, R. L -----	Aug. 20, 1889			

173. CONDUCTORS.—70. CONDUCTORS—UNDERGROUND.

406,818	Cook, G. W -----	July 9, 1889	422,244	Muckle, M. R., jr., and Smith, T. C -----	Feb. 25, 1890
407,447	Phipps, E. H -----	July 23, 1889			
411,427	Dashiell, C. C -----	Sept. 24, 1889	423,023	Bruner, A -----	Mar. 11, 1890
411,539	Wheeler, G. A -----	Sept. 24, 1889	423,134	Cope, T. J -----	Mar. 11, 1890
411,595	Hyland, D. M -----	Sept. 24, 1889	424,057	Gilman, C. C -----	Mar. 25, 1890
412,095	Johnson, I. La R -----	Oct. 1, 1889	424,935	Reid, E. S -----	Apr. 1, 1890
413,133	Denison, S. P -----	Oct. 15, 1889	425,913	Smith, A. J -----	Apr. 15, 1890
413,134	Denison, S. P -----	Oct. 15, 1889	425,961	Seubel, P -----	Apr. 15, 1890
413,215	Warde, G. H -----	Oct. 22, 1889	426,196	Munsie, J. F -----	Apr. 22, 1890
414,327	Richards, J. W. and Hall, J. B -----	Nov. 5, 1889	426,197	Munsie, J. F -----	Apr. 22, 1890
414,970	Camp, H. B -----	Nov. 12, 1889	426,198	Munsie, J. F -----	Apr. 22, 1890
415,110	Johnson, I. La R -----	Nov. 12, 1889	426,199	Munsie, J. F -----	Apr. 22, 1890
415,751	Wesslau, B. H. and Trautwein, G -----	Nov. 26, 1889	426,201	Munsie, J. F -----	Apr. 22, 1890
415,752	Wesslau, B. H -----	Nov. 26, 1889	426,205	Munsie, J. F -----	Apr. 22, 1890
416,143	Wesslau, B. H -----	Nov. 26, 1889	426,206	Munsie, J. F -----	Apr. 22, 1890
416,144	Wesslau, B. H -----	Nov. 26, 1889	427,039	Brooks, D., jr -----	May 6, 1890
416,234	Perot, E. S -----	Dec. 3, 1889	427,445	Sprague, G -----	May 6, 1890
416,235	Perot, E. S -----	Dec. 3, 1889	429,104	Witthaus, E. L -----	May 27, 1890
417,688	Tatham, J -----	Dec. 17, 1889	429,251	Stafford, J -----	June 3, 1890
417,992	Dell, J -----	Dec. 24, 1889	429,307	Cobb, H. B -----	June 3, 1890
417,998	Emmet, W. Le R -----	Dec. 24, 1889	430,010	Flad, H -----	June 10, 1890
421,088	Tyler, W. P -----	Feb. 11, 1890	430,297	Patterson, W. R -----	June 17, 1890

173. CONDUCTORS.—14. CONNECTORS.

406,331	Baker, W. H -----	July 2, 1889	417,842	Runkel, J. P -----	Dec. 24, 1889
409,183	De Ferranti, S. Z -----	Aug. 20, 1889	419,365	Seely, J. A -----	Jan. 14, 1890
411,093	Coughlin, W. H -----	Sept. 17, 1889	420,171	Seely, J. A -----	Jan. 28, 1890
411,153	Lafferty, S. C -----	Sept. 17, 1889	421,802	Wollensak, J. F -----	Feb. 18, 1890
412,347	Smith, W. F -----	Oct. 8, 1889	422,058	McIntire, C -----	Feb. 25, 1890
412,889	McIntire, C -----	Oct. 15, 1889	426,200	Munsie, J. F -----	Apr. 22, 1890
413,879	Winder, W -----	Oct. 29, 1889	426,204	Munsie, J. F -----	Apr. 22, 1890
414,362	Anderson, A -----	Nov. 5, 1889	427,138	Wamsley, W. F. and McIntosh, T -----	May 6, 1890
416,284	Adams, T. E -----	Dec. 3, 1889	428,046	Hanagin, J. A -----	May 13, 1890
416,288	Delany, P. B -----	Dec. 3, 1889	429,745	Van Depoele, C. J -----	June 10, 1890

173. CONDUCTORS.—28. INSULATORS.

406,041	Gill, J. C -----	July 2, 1889	419,642	Cornog, I. P -----	Jan. 21, 1890
406,994	Chinnock, F. R -----	July 16, 1889	420,635	Stieringer, L -----	Feb. 4, 1890
408,383	Graham, C. G -----	Aug. 6, 1889	421,819	Davy, J. W -----	Feb. 18, 1890
410,637	Davis, W. M -----	Sept. 10, 1889	422,651	Stanley, G. E -----	Mar. 4, 1890
411,749	McCarthy, L -----	Sept. 24, 1889	425,513	Kookogey, W. P -----	Apr. 15, 1890
411,801	Fletcher, J. R -----	Oct. 1, 1889	426,203	Munsie, J. F -----	Apr. 22, 1890
413,146	McCarthy, L -----	Oct. 15, 1889	427,296	Busby, J. F -----	May 6, 1890
415,504	Fowler, G -----	Nov. 19, 1889	428,545	Andrews, E -----	May 20, 1890
416,122	Park, W. R -----	Nov. 26, 1889	428,979	Watson, G. B -----	May 27, 1890
418,369	Huff, G. E -----	Dec. 31, 1889	430,296	Oakman, S. -----	June 17, 1890
418,766	Smith, J. B -----	Jan. 7, 1890	430,696	Seamon, W. H -----	June 24, 1890

173. CONDUCTORS.—31. LIGHTNING-RODS.

406,681	Watts, J. H. C -----	July 9, 1889	407,660	Hill, C. F -----	July 23, 1889
---------	----------------------	--------------	---------	------------------	---------------

173. CONDUCTORS.—43. RHEOSTATS.

408,647	Blackwell, F. O -----	Aug. 6, 1889	412,449	Askew, C. B -----	Oct. 8, 1889
409,135	Bentley, E. M -----	Aug. 13, 1889	420,894	Thompson, W. -----	Feb. 4, 1890
411,947	Wightman, M. J -----	Oct. 1, 1889	427,032	Bain, F -----	May 6, 1890

174. MEDICAL AND SURGICAL.—87. BATHS.

No.	NAME.	DATE.	No.	NAME.	DATE.
421,294	Lyke, N-----				Feb. 11, 1890

174. MEDICAL AND SURGICAL.—88. BODY-WEAR.

406,306	Pratt, H. P-----	July 2, 1889	420,611	Stephens, J. E-----	Feb. 4, 1890
407,115	Pratt, H. P-----	July 16, 1889	420,740	Sheffield, A. J-----	Feb. 4, 1890
407,473	Dow, A-----	July 23, 1889	420,840	Thomas, M. E-----	Feb. 4, 1890
407,673	Mellon, J. S-----	July 23, 1889	420,936	Hall, O. S-----	Feb. 11, 1890
408,151	Welcker, H-----	July 30, 1889	421,457	Wadleigh, M-----	Feb. 18, 1890
409,673	Everett, C-----	Aug. 27, 1889	422,107	Ayer, C. H-----	Feb. 25, 1890
409,968	Holmes, W. C-----	Aug. 27, 1889	423,549	Brunning, C. E-----	Mar. 18, 1890
410,652	Scott, G. A-----	Sept. 10, 1889	424,786	Hill, E. A-----	Apr. 1, 1890
411,639	Smith, C. C. and Martin, H. W-----	Sept. 24, 1889	424,827	Shelton, W. J-----	Apr. 1, 1890
412,196	Mellon, J. S-----	Oct. 1, 1889	427,468	Dow, A-----	May 6, 1890
414,668	Laughton, W-----	Nov. 5, 1889	428,420	Scott, A. I-----	May 20, 1890
415,274	Kane, H. H-----	Nov. 19, 1889	428,540	Williams, R. E-----	May 20, 1890
416,803	Phillippi, F. A-----	Dec. 10, 1889	11,053	Reitler, C. W-----	Jan. 7, 1890
419,013	Grimley, C. H-----	Jan. 7, 1890			

174. MEDICAL AND SURGICAL.—89. ELECTRODES.

407,116	Pratt, H. P-----	July 16, 1889	420,300	Hicks, T. H-----	Jan. 28, 1890
408,607	Flint, F. W-----	Aug. 6, 1889	420,710	Bache, R. M-----	Feb. 4, 1890
409,470	Lawrance, G. McG-----	Aug. 20, 1889	424,012	MacMaster, M. A-----	Mar. 25, 1890
412,165	Cox, H. B-----	Oct. 1, 1889	429,068	Sommerville, A. R-----	May 27, 1890
418,227	Robinson, E. W-----	Dec. 31, 1889			

175. SPECIAL APPLICATIONS.—4. APPLICATIONS—GENERAL.

407,477	Ezell, F-----	July 23, 1889	423,361	Wallace, J. S-----	Mar. 11, 1890
408,465	Dewey, M. W-----	Aug. 6, 1889	423,654	Amet, E. H-----	Mar. 18, 1890
409,738	Elfering, J. H-----	Aug. 27, 1889	423,965	Thomson, E-----	Mar. 25, 1890
412,924	Kester, J. F-----	Oct. 15, 1889	424,729	Scherer, F-----	Apr. 1, 1890
413,058	Hirsch, L-----	Oct. 15, 1889	428,042	Conly, M. S-----	May 13, 1890
417,763	Whilton, F. J-----	Dec. 24, 1889	429,033	Ide, F. F-----	May 27, 1890
420,954	Nutting, S. E-----	Feb. 11, 1890	430,387	Kennedy, J. C-----	June 17, 1890
420,955	Nutting, S. E-----	Feb. 11, 1890			

175. SPECIAL APPLICATIONS.—5. APPLICATIONS—TOOLS AND MACHINES.

409,097	Casey, F. M-----	Aug. 13, 1889	414,695	Gaynor, T. F-----	Nov. 12, 1889
410,180	Ongley, C. E-----	Sept. 3, 1889	417,132	Baldwin, C. W-----	Dec. 10, 1889
410,182	Ongley, C. E-----	Sept. 3, 1889	419,111	Casey, F. M-----	Jan. 7, 1890
410,183	Ongley, C. E-----	Sept. 3, 1889	420,771	Clark, J. H-----	Feb. 4, 1890
410,184	Ongley, C. E-----	Sept. 3, 1889	422,245	Hart, A. W-----	Mar. 11, 1890
410,212	Smith, R. C-----	Sept. 3, 1889	422,948	Kilbourn, W. H-----	Mar. 11, 1890
412,332	Gibson, W. P-----	Oct. 8, 1889	422,968	Paine, W. J-----	Mar. 11, 1890
412,333	Gibson, W. P-----	Oct. 8, 1889	427,549	Burton, J. M-----	May 13, 1890
414,637	Goodson, G. A-----	Nov. 5, 1889	429,012	Carpenter, C. F-----	May 27, 1890

175. SPECIAL APPLICATIONS.—21. ELECTRO-MAGNETS.

413,411	McElroy, D. S-----	Oct. 22, 1889	424,703	Clarke, G. D-----	Apr. 1, 1890
421,067	Currie, S. C. C-----	Feb. 11, 1890	427,606	Patten, F. J-----	May 13, 1890
422,512	Eickemeyer, R-----	Mar. 4, 1890	430,606	Alexander, W. W-----	June 24, 1890

175. SPECIAL APPLICATIONS.—16. HEATERS.

406,890	Dewey, M. W-----	July 16, 1889	412,599	Coffin, C. L-----	Oct. 8, 1889
408,875	Dewey, M. W-----	Aug. 13, 1889	413,136	Dewey, M. W-----	Oct. 15, 1889
409,015	Coffin, C. L-----	Aug. 13, 1889	414,714	Leonard, M. B-----	Nov. 12, 1889
411,737	Smith, D. W-----	Sept. 24, 1889	415,856	Carpenter, C. E-----	Nov. 26, 1889

175. SPECIAL APPLICATIONS.—16. HEATERS—Continued.

No.	NAME.	DATE.	No.	NAME.	DATE.
416,360	Dewey, M. W.-----	Dec. 3, 1889	424,047	Butterfield, H. R. and Mitchell, W.	Mar. 25, 1890
416,873	Tilghman, B. C.-----	Dec. 10, 1889			
417,013	Fowler, H. E.-----	Dec. 10, 1889	424,403	Butterfield, H. R.-----	Mar. 25, 1890
417,920	Hunter, R. M.-----	Dec. 24, 1889	424,404	Butterfield, H. R. and Mitchell, W.	Mar. 25, 1890
418,198	Lemp, H. and Thomson, E.-----	Dec. 31, 1889			
418,911	Dewey, M. W.-----	Jan. 7, 1890	424,441	Wood, W. M.-----	Mar. 25, 1890
419,032	Coffin, C. L.-----	Jan. 7, 1890	424,921	Capek, J. V.-----	Apr. 1, 1890
419,033	Coffin, C. L.-----	Jan. 7, 1890	424,922	Capek, J. V.-----	Apr. 1, 1890
419,282	O'Meara, J.-----	Jan. 14, 1890	425,164	Coffin, C. L.-----	Apr. 8, 1890
420,641	Dewey, M. W.-----	Feb. 4, 1890	425,757	Dewey, M. W.-----	Apr. 13, 1890
420,648	Williams, J. B.-----	Feb. 4, 1890	426,437	Drew, C. W. and Francis, E. R.	Apr. 29, 1890
421,185	Miner, W. M.-----	Feb. 11, 1890	426,781	Dewey, M. W.-----	Apr. 29, 1890
421,498	Hubinger, J. C.-----	Feb. 18, 1890	427,151	Burton, G. D.-----	May 6, 1890
421,499	Hubinger, J. C.-----	Feb. 18, 1890	427,574	Howard, B. C.-----	May 13, 1890
422,190	Dewey, M. W.-----	Feb. 25, 1890	427,971	Coffin, C. L.-----	May 13, 1890
422,730	Coffin, C. L.-----	Mar. 4, 1890	428,443	Ashbaugh, J. I.-----	May 20, 1890
423,223	Dewey, M. W.-----	Mar. 11, 1890	428,459	Coffin, C. L.-----	May 20, 1890
423,421	Farrall, T. D.-----	Mar. 18, 1890	428,616	Lemp, H.-----	May 27, 1890
423,732	Coffin, C. L.-----	Mar. 18, 1890	428,617	Lemp, H.-----	May 27, 1890
423,733	Coffin, C. L.-----	Mar. 18, 1890	428,619	Lemp, H.-----	May 27, 1890
423,734	Coffin, C. L.-----	Mar. 18, 1890	429,559	Carpenter, C. E.-----	June 3, 1890
423,735	Coffin, C. L.-----	Mar. 18, 1890	429,560	Carpenter, C. E.-----	June 3, 1890
423,736	Coffin, C. L.-----	Mar. 18, 1890	429,561	Carpenter, C. E.-----	June 3, 1890
423,956	Ross, R.-----	Mar. 25, 1890	429,562	Carpenter, C. E.-----	June 3, 1890
423,966	Thomson, E.-----	Mar. 25, 1890	430,838	Dewey, M. W.-----	June 24, 1890
423,967	Thomson, E.-----	Mar. 25, 1890	430,839	Dewey, M. W.-----	June 24, 1890

175. SPECIAL APPLICATIONS.—115. IGNITING DEVICES—AUTOMATIC.

408,785	Zoeller, T. J.-----	Aug. 13, 1889	417,075	Newman, N.-----	Dec. 10, 1889
414,763	Estabrook, W. W.-----	Nov. 12, 1889	417,198	Newman, N.-----	Dec. 10, 1889
416,635	Lungen, A.-----	Dec. 3, 1889			

175. SPECIAL APPLICATIONS.—116. IGNITING DEVICES—MANUAL.

412,464	Carranza, M. and Tinoco, J. M.-----	Oct. 8, 1889	428,433	Walton, R. T.-----	May 20, 1890
426,381	Hinds, C. H.-----	Apr. 22, 1890			

175. SPECIAL APPLICATIONS.—25. INCORUSTATION.

409,136	Cabell, S. G.-----	Aug. 13, 1889	430,461	Bull, W. B.-----	June 17, 1890
425,903	Porter, W. H.-----	Apr. 15, 1890	430,462	Bull, W. B.-----	June 17, 1890

175. SPECIAL APPLICATIONS.—93. MAGNETIC LOCKS AND BOLTS.

408,484	Huebner, L. and Busse, R.-----	Aug. 6, 1889	425,777	Godfrey, W. L.-----	Apr. 15, 1890
409,508	Schwenke, P.-----	Aug. 20, 1889	427,341	Meyers, H. J.-----	May 6, 1890
416,103	Harter, G. A.-----	Nov. 26, 1889	428,247	Fenner, W. W.-----	May 20, 1890
419,766	Glaeser, A.-----	Jan. 21, 1890	428,256	Schneider, J.-----	May 20, 1890
420,834	Seib, G. A.-----	Feb. 4, 1890	430,764	Beers, C. B. and Tuttle, W. B.-----	June 24, 1890
421,567	Grah, W., jr.-----	Feb. 18, 1890			

175. SPECIAL APPLICATIONS.—90. SEPARATORS.

406,337	Conkling, G.-----	July 2, 1889	422,732	Conkling, G.-----	Mar. 4, 1890
410,876	Conkling, G.-----	Sept. 10, 1889	423,907	Conkling, G.-----	Mar. 25, 1890
410,877	Conkling, G.-----	Sept. 10, 1889	430,058	Ball, C. M. and Norton, S.-----	June 10, 1890
411,414	Anthony, W. A.-----	Sept. 24, 1889	430,275	Edison, T. A.-----	June 17, 1890
411,899	Moffatt, R. R.-----	Oct. 1, 1889	430,280	Edison, T. A.-----	June 17, 1890
418,041	Mitchell, N. C.-----	Dec. 24, 1889	430,758	Smith, H. B.-----	June 24, 1890
420,334	Conkling, G.-----	Jan. 28, 1890	11,012	Conkling, G.-----	July 16, 1890

175. SPECIAL APPLICATIONS.—84. VALVE-CONTROLLERS.

No.	NAME.	DATE.	No.	NAME.	DATE.
406,751	Martenot, F -----	July 9, 1889	415,871	Kissell, M. A. and A. S. -----	Nov. 26, 1889
409,170	Wheeler, M. C. and Clark, A. M. -----	Aug. 20, 1889	421,449	Stout, J. V -----	Feb. 18, 1890
411,150	Kissell, A. S -----	Sept. 17, 1889	422,956	Malmberg, E. R -----	Mar. 11, 1890
411,908	Stevens, F -----	Oct. 1, 1889	424,761	Conroy, J. C -----	Apr. 1, 1890
412,529	Neu, G. S -----	Oct. 8, 1889			

176. ELECTRIC LIGHTING.—80. CUT-OUTS—ELECTRO-MAGNETIC.

407,455	Smith, A. T -----	July 23, 1889	425,726	Batchelor, C -----	Apr. 15, 1890
411,238	Danals, C. A -----	Sept. 17, 1889	427,237	Kissell, A. S -----	May 6, 1890
420,622	Dickerson, E. N, jr -----	Feb. 4, 1890	427,724	Bentley, E. M -----	May 13, 1890
421,177	Lemp, H -----	Feb. 11, 1890	428,935	McLaughlin, J. F -----	May 27, 1890
421,207	Thomson, E -----	Feb. 11, 1890	430,096	Waddell, M -----	June 10, 1890
422,524	Happoldt, M. C -----	Mar. 4, 1890	430,326	Thomson, E. and Rice, E. W., jr -----	June 17, 1890
423,638	Scribner, C. E -----	Mar. 18, 1890			

176. ELECTRIC LIGHTING.—79. CUT-OUTS—MECHANICAL.

406,468	Powers, J. A -----	July 9, 1889	424,739	Van Nuis, C. S -----	Apr. 1, 1890
406,897	Gaynor, T. F -----	July 16, 1889	425,205	Bush, A. R -----	Apr. 8, 1890
406,906	Hill, W. S -----	July 16, 1889	425,507	Hamilton, C. J -----	Apr. 15, 1890
408,194	Riggs, H. T -----	July 30, 1889	426,049	Norton, J. P -----	Apr. 22, 1890
408,678	Thompson, W -----	Aug. 6, 1889	427,024	Whitaker, H. B -----	Apr. 29, 1890
411,935	Seymour, A. P -----	Oct. 1, 1889	427,521	Platt, O. S. and Orford, J. M -----	May 6, 1890
412,159	Bennett, F. M -----	Oct. 1, 1889	427,522	Platt, O. S. and Orford, J. M -----	May 6, 1890
414,966	Battershall, J. W -----	Nov. 12, 1889	427,523	Platt, O. S. and Orford, J. M -----	May 6, 1890
417,497	Morgan, R. A., jr -----	Dec. 17, 1889	428,586	Alton, G. H -----	May 27, 1890
421,179	Little, E. W -----	Feb. 11, 1890	428,704	Thomson, E -----	May 27, 1890
422,147	Parker, W. E. and Temple, H. E -----	Feb. 25, 1890	428,934	McLaughlin, J. F -----	May 27, 1890
422,705	Berrenberg, A. and Umbehend, J. -----	Mar. 4, 1890	429,054	Andersen, J. M -----	June 10, 1890
423,488	McEvoy, T. F -----	Mar. 28, 1890	430,252	Norton, J. A -----	June 17, 1890

176. ELECTRIC LIGHTING.—78. CUT-OUTS—THERMAL.

406,268	Currie, S. C. C -----	July 2, 1889	421,396	Frei, G. A -----	Feb. 18, 1890
406,469	Powers, J. A -----	July 9, 1889	423,102	Wood, J. J -----	Mar. 11, 1890
409,628	Bishop, W. S -----	Aug. 20, 1889	424,229	Seely, J. A -----	Mar. 28, 1890
410,545	Furlong, L. F -----	Sept. 3, 1889	425,762	Edison, T. A -----	Apr. 15, 1890
411,380	Heller, F. G. A -----	Sept. 17, 1889	426,024	Von der Kammer, J -----	Apr. 22, 1890
411,423	Bussman, O. S -----	Sept. 24, 1889	426,057	Patterson, T -----	Apr. 22, 1890
411,452	Klein, P. H., jr -----	Sept. 24, 1889	426,082	Thomson, E -----	Apr. 22, 1890
413,703	Wurts, A -----	Oct. 29, 1889	426,156	Warrell, F. G -----	Apr. 22, 1890
413,735	Schaefer, L -----	Oct. 29, 1889	427,548	Brush, C. F -----	May 13, 1890
413,813	Root, H. C -----	Oct. 29, 1889	427,823	Anthony, W. A -----	May 13, 1890
414,792	Bottomo, T. D -----	Nov. 12, 1889	428,564	Jenks, W. J -----	May 20, 1890
417,753	Von der Kammer, J -----	Dec. 24, 1889	429,133	Kammeyer, C. E -----	June 3, 1890
420,444	Farrell, G -----	Feb. 4, 1890	429,584	Possions, N. S -----	June 3, 1890
421,180	Little, E. W -----	Feb. 11, 1890	430,967	Miller, I. N -----	June 24, 1890
421,240	Cardew, P -----	Feb. 11, 1890			

176. ELECTRIC LIGHTING.—105. LIGHTS—ARC, GRAVITY FEED, CLUTCH.

408,948	Barker, W. H -----	Aug. 13, 1889	415,572	Scribner, C. E -----	Nov. 19, 1889
410,493	Cohen, R. L -----	Sept. 3, 1889	418,757	Scribner, C. E -----	Jan. 7, 1890
414,130	Seifert, F. W. R -----	Oct. 29, 1889	420,109	Scribner, C. E -----	Jan. 28, 1890
415,571	Scribner, C. E -----	Nov. 19, 1889	430,260	Alcock, A. U. and Galopin, H -----	June 17, 1890

176. ELECTRIC LIGHTING.—106. LIGHTS—ARC, GRAVITY FEED, GEAR-CLUTCH.

407,915	Wood, J. J -----	July 30, 1889	420,314	Scheffbauer, R -----	Jan. 28, 1890
408,887	Lighthipe, J. A -----	Aug. 13, 1889	424,866	Dulait, J -----	Apr. 1, 1890
411,287	Kinsman, F. E -----	Sept. 17, 1889	426,405	Wood, J. J -----	Apr. 22, 1890
412,141	Von Heßner-Altenack, F. and Hoffmann, C -----	Oct. 1, 1889	428,008	Lange, P -----	May 13, 1890
418,444	Bunnell, J. H -----	Dec. 31, 1889	429,573	Keller, C. L -----	June 3, 1890
418,987	Russell, E. C -----	Jan. 7, 1890	429,787	Cocroper, C -----	June 10, 1890
			430,722	Wood, J. J -----	June 24, 1890

176. ELECTRIC LIGHTING.—107. LIGHTS—ARC, POSITIVE FEED.

No.	NAME.	DATE.	No.	NAME.	DATE.
414,141	Chapman, F. G. and Dearing, F. M.	Oct. 29, 1889	424,752	Beach, R. H. -----	Apr. 1, 1890
417,516	Shawhan, J. F. -----	Dec. 17, 1889	430,357	Thomson, E. -----	June 17, 1890

176. ELECTRIC LIGHTING.—108. LIGHTS—ARC, POSITIVE FEED, CLUTCH.

418,758	Scribner, C. E. -----	Jan. 7, 1890	428,066	Breese, C. P. -----	May 20, 1890
---------	-----------------------	--------------	---------	---------------------	--------------

176. ELECTRIC LIGHTING.—109. LIGHTS—ARC, POSITIVE FEED, GEAR-CLUTCH.

409,390	Carson, R. D. -----	Aug. 20, 1889	422,446	Pyle, G. C. -----	Mar. 4, 1890
411,713	Cox, F. P. -----	Sept. 24, 1889			

176. ELECTRIC LIGHTING.—110. LIGHTS—ARC AND INCANDESCENT.

411,088	Boardman, F. R. -----	Sept. 17, 1889	423,873	Pieper, H., fils. -----	Mar. 18, 1890
423,807	Pieper, H., fils. -----	Mar. 18, 1890			

176. ELECTRIC LIGHTING.—112. LIGHTS—ARC, SPECIAL FEATURES.

407,914	Wood, J. J. -----	July 30, 1889	423,637	Scribner, C. E. -----	Mar. 18, 1890
411,936	Seymour, A. P. -----	Oct. 1, 1889	427,195	Seymour, A. P. -----	May 6, 1890
408,740	Asmus, G. C. -----	Oct. 15, 1889	428,358	Stevens, N. P. -----	May 20, 1890
413,011	Brady, T. H. -----	Oct. 22, 1889	428,942	Pawlowski, J. -----	May 27, 1890
413,220			430,622	Chase, J. -----	June 24, 1890
416,847	McLaughlin, J. -----	Dec. 10, 1889			
416,862	Schardt, B. and Lutzenberger, W.	Dec. 10, 1889			

176. ELECTRIC LIGHTING.—102. LIGHTS—FILAMENTS AND CARBONS.

408,286	Bottome, T. D. -----	Aug. 6, 1889	421,733	Liedke, E. L. -----	Feb. 18, 1890
408,358	Schroeder, C. A. J. H. -----	Aug. 6, 1889	422,302	Head, H. H. and Saunderson, L.	Feb. 25, 1890
408,740	Opperman, A. F. -----	Aug. 13, 1889	422,456	Smith, W. F. -----	Mar. 4, 1890
410,168	Lemp, H. -----	Sept. 3, 1889	422,895	Smith, W. F. -----	Mar. 4, 1890
411,016	Edison, T. A. -----	Sept. 17, 1889	426,479	Tremaine, H. A. -----	Apr. 29, 1890
411,017	Edison, T. A. -----	Sept. 17, 1889	428,435	Westinghouse, G., jr. -----	May 20, 1890
411,018	Edison, T. A. -----	Sept. 17, 1889	428,604	Heisler, C. -----	May 27, 1890
411,020	Edison, T. A. -----	Sept. 17, 1889	429,534	De Khotinsky, A. -----	June 3, 1890
411,474	Sellon, J. S. -----	Sept. 24, 1889	429,535	De Khotinsky, A. -----	June 3, 1890
418,474	Saunderson, L. -----	Dec. 31, 1889	430,933	Edison, T. A. -----	June 24, 1890
420,881	Langhans, R. -----	Feb. 4, 1890	439,991	Davis, J. H. -----	June 24, 1890
421,469	Adeney, W. E. and Saunderson, L.	Feb. 18, 1890			

176. ELECTRIC LIGHTING.—18. LIGHTS—INCANDESCENT.

406,130	Edison, T. A. -----	July 2, 1889	417,789	Packard, J. W. -----	Dec. 24, 1889
406,498	Backstrom, C. A. -----	July 9, 1889	419,829	Cobb, S. B. -----	Jan. 21, 1890
411,019	Edison, T. A. -----	Sept. 17, 1889	425,761	Edison, T. A. -----	Apr. 15, 1890
413,636	Van Gestel, J. T. -----	Oct. 22, 1889	426,055	Packard, J. W. -----	Apr. 22, 1890
414,741	Wilson, G. W. -----	Nov. 12, 1889	429,172	Irwin, J. H. -----	June 3, 1890
414,742	Wilson, G. W. -----	Nov. 12, 1889	429,608	Dyer, R. N. -----	June 10, 1890
415,335	Reese, J. -----	Nov. 19, 1889	430,156	Voelker, W. L. -----	June 17, 1890
416,632	Leber, L. H. -----	Dec. 3, 1889	430,932	Edison, T. A. -----	June 24, 1890
417,685	Sawyer, H. H. -----	Dec. 17, 1889			

176. ELECTRIC LIGHTING.—113. LIGHTS—INCANDESCENT, SPECIAL FEATURES.

407,077	Kimball, J. L. and Wirt, H. C.	July 16, 1889	418,270	Braun, D. J. -----	Dec. 31, 1889
408,600	Erickson, E. E. -----	Aug. 6, 1889	418,636	Baillard, G. C. -----	Dec. 31, 1889
409,498	Pierce, T. J. -----	Aug. 20, 1889	419,674	Hollings, J. C. -----	Jan. 21, 1890
410,293	Rockwell, F. C. -----	Sept. 3, 1889	419,733	Story, C. B. -----	Jan. 21, 1890
410,689	Hollings, J. C. -----	Sept. 10, 1889	419,962	Lane, G. M. -----	Jan. 21, 1890
413,442	Gennert, E. F. -----	Oct. 22, 1889	419,967	Lane, G. M. -----	Jan. 21, 1890
413,708	Coad, T. -----	Oct. 29, 1889	420,391	Rice, E. W., jr. -----	Jan. 28, 1890

176. ELECTRIC LIGHTING.—113. LIGHTS—INCANDESCENT, SPECIAL FEATURES—Continued.

No.	NAME.	DATE.	No.	NAME.	DATE.
420,552	Brown, J. E. and J. F. -----	Feb. 4, 1890	426,189	Klein, P. H., jr -----	Apr. 22, 1890
421,864	Layng, W. H. -----	Feb. 18, 1890	427,062	Erickson, E. E. -----	May 6, 1890
422,196	Flora, E. E. and Hoy, P. R. -----	Feb. 25, 1890	430,437	Rockwell, F. C. -----	June 17, 1890
423,207	Bauer, A. H. -----	Mar. 11, 1890	430,645	Heath, J. -----	June 24, 1890
426,121	Gennert, E. F. -----	Apr. 22, 1890	430,846	Gennert, E. F. -----	June 24, 1890

176. ELECTRIC LIGHTING.—98. LIGHTS—SOCKETS AND KEYS.

409,929	Collier, J. W. -----	Aug. 27, 1889	420,705	Stewart, J. -----	Feb. 4, 1890
412,361	Bergmann, S. -----	Oct. 8, 1889	420,706	Stewart, J. -----	Feb. 4, 1890
412,962	Loomis, O. P. -----	Oct. 15, 1889	421,586	Kookogey, W. P. -----	Feb. 18, 1890
414,922	Rodman, S., jr -----	Nov. 12, 1889	421,630	Stewart, J. -----	Feb. 18, 1890
416,051	Chassagne, P. J. -----	Nov. 26, 1889	422,360	Wollin, W. F. and Werline, E. H. -----	Feb. 25, 1890
417,787	Packard, J. W. -----	Dec. 24, 1889	422,634	Rockwell, F. C. -----	Mar. 4, 1890
417,788	Packard, J. W. -----	Dec. 24, 1889	425,588	Thomson, E. and Rice, E. W., jr -----	Apr. 15, 1890
418,426	Thone, F. -----	Dec. 31, 1889	425,741	Bradley, J. J. -----	Apr. 15, 1890
418,855	Storey, I. E. -----	Jan. 7, 1890	427,514	Holmes, A. B. and Gale, G. F. -----	May 6, 1890
419,617	Lawton, C. H. -----	Jan. 14, 1890	428,652	Thomson, E. and Alton, G. H. -----	May 27, 1890
420,370	Wightman, M. J. -----	Jan. 28, 1890	430,485	Rockwell, F. C. -----	June 17, 1890
420,077	Lemp, H. -----	Jan. 28, 1890			

176. ELECTRIC LIGHTING.—19. SYSTEMS.

407,210	Hunter, J. H. -----	July 16, 1889	420,198	Guerrant, G. M. -----	Jan. 28, 1890
407,895	Kinsman, E. E. -----	July 30, 1889	422,910	Brown, H. P. -----	Mar. 11, 1890
411,970	Shallenberger, O. B. -----	Oct. 1, 1889	425,125	Douglass, A. -----	Apr. 8, 1890
413,160	Barrett, S. H. -----	Oct. 22, 1889	425,801	Johnson, F. -----	Apr. 15, 1890
416,611	Hochhausen, W. -----	Dec. 3, 1889	428,050	Macloskie, C. H. -----	May 13, 1890
416,612	Hochhausen, W. -----	Dec. 3, 1889	430,934	Edison, T. A. -----	June 24, 1890

177. ELECTRIC SIGNALING.—1. ALARMS.

408,992	Schmidt, J. M. -----	Aug. 13, 1889	419,312	Bulluck, W. -----	Jan. 14, 1890
409,088	Williams, G. M. -----	Aug. 13, 1889	419,924	Catz, J. -----	Jan. 21, 1890
409,460	Dunn, F. M., Petticord, A. and King, J. H. -----	Aug. 20, 1889	422,803	Kildoyle, E. E. -----	Mar. 4, 1890
			423,385	Miesse, A. -----	Mar. 11, 1890
411,230	Streepier, D. H. -----	Sept. 17, 1889	425,570	Griggs, A. C. -----	Apr. 15, 1890
414,883	Harrison, E. L. -----	Nov. 12, 1889	427,873	Jones, J. W. -----	May 13, 1890
416,381	Smith, R. D. O. -----	Dec. 3, 1889	428,482	Guss, O. G. -----	May 20, 1890
417,117	Thompson, A. C. and Newton, H. E. -----	Dec. 10, 1889	428,688	Morehead, J. -----	May 27, 1890
			429,286	Rosenfield, W. W. -----	June 3, 1890

177. ELECTRIC SIGNALING.—2. ALARMS—BURGLAR.

406,709	Dawson, J. W. -----	July 9, 1889	424,387	Watson, N. M. -----	Mar. 25, 1890
410,683	Carhart, E. M. -----	Sept. 10, 1889	425,143	Moran, J. -----	Apr. 8, 1890
412,563	Streepier, D. H. -----	Oct. 8, 1889	426,705	Bleakley, W. M. -----	Apr. 29, 1890
414,308	Goucher, A. A. -----	Nov. 5, 1889	426,706	Bleao, J. H. -----	Apr. 29, 1890
416,971	Taylor, E. W. -----	Dec. 10, 1889	428,774	Hayward, E. and Sims, E. S. -----	May 27, 1890
420,070	Howey, W. J. -----	Jan. 28, 1890	429,817	Shubert, H. C. -----	June 10, 1890
420,697	Powell, N. M. -----	Feb. 4, 1890	430,373	Broichgans, S. -----	June 17, 1890
421,339	Wollensak, J. F. -----	Feb. 11, 1890	430,979	Winegarden, J. -----	June 24, 1890
423,753	Gee, W. -----	Mar. 18, 1890			

177. ELECTRIC SIGNALING.—3. ANNUNCIATORS.

406,377	Vanderpool, A. A. -----	July 2, 1889	415,182	Hess, A. T. -----	Nov. 12, 1889
406,423	Bower, J. F. -----	July 9, 1889	415,915	Lee, C. E. -----	Nov. 26, 1889
407,101	Milliken, G. F. -----	July 16, 1889	416,712	Carter, F. S. -----	Dec. 10, 1889
411,133	Scribner, C. E. -----	Sept. 17, 1889	418,868	Finck, J. -----	Jan. 7, 1890
411,772	Armstrong, C. G. -----	Oct. 1, 1889	421,439	Shipway, T. H. and Dowdell, J. R. -----	Feb. 18, 1890
413,504	Fisher, F. E. -----	Oct. 22, 1889			
414,343	Thackeray, W. T. W. and Hurn, I. -----	Nov. 5, 1889	421,508	Parks, A. F. -----	Feb. 18, 1890
			421,530	Straight, G. H. -----	Feb. 18, 1890
414,879	Edgecomb, D. W. and Terry, C. A. -----	Nov. 12, 1889	422,654	Suren, N. H. -----	Mar. 4, 1890
			422,773	Hamilton, C. J. -----	Mar. 4, 1890

177. ELECTRIC SIGNALING.—3. ANNUNCIATORS—Continued.

No.	NAME.	DATE.	No.	NAME.	DATE.
422,981	Shafer, B. F. -----	Mar. 11, 1890	426,307	Paca, W. S. -----	Apr. 22, 1890
423,494	Scribner, C. E. -----	Mar. 18, 1890	427,879	Lane, F. A. -----	May 13, 1890
424,725	Porter, M. D. -----	Apr. 1, 1890	428,095	Hart, O. W. -----	May 20, 1890
424,726	Porter, M. D. -----	Apr. 1, 1890	428,810	Garsed, R. P. -----	May 27, 1890
425,078	Hynes, M. -----	Apr. 8, 1890	429,599	Bishop, J. D. -----	June 10, 1890
426,134	Miller, J. J. -----	Apr. 22, 1890	430,735	Garsed, R. P. -----	June 24, 1890

177. ELECTRIC SIGNALING.—7. BELLS.

406,293	McLaughlin, J. F. -----	July 2, 1889	415,990	Zigang, J. P. -----	Nov. 26, 1889
406,294	McLaughlin, J. F. -----	July 2, 1889	416,243	Tirrell, J. P. -----	Dec. 3, 1889
408,676	Smith, T. J. -----	Aug. 6, 1889	417,926	Lane, F. A. -----	Dec. 24, 1889
408,968	Gaynor, T. F. -----	Aug. 13, 1889	418,560	Frost, E. -----	Dec. 31, 1889
410,189	Phalan, J. H. -----	Sept. 3, 1889	423,014	Woodbury, L. S. -----	Mar. 11, 1890
411,120	Cole, W. R. -----	Sept. 17, 1889	423,697	Pinolet, L. M. -----	Mar. 18, 1890
414,612	Cox-Walker, E. and Swinton, A. A. C. -----	Nov. 5, 1889	423,707	Stanley, A. F. -----	Mar. 18, 1890

177. ELECTRIC SIGNALING.—26. INDICATORS.

406,829	Fiske, B. A. -----	July 9, 1889	420,890	Randall, C. A. -----	Feb. 4, 1890
406,830	Fiske, B. A. -----	July 9, 1889	420,964	Robinson, W. H. -----	Feb. 11, 1890
407,490	McIntosh, G. -----	July 23, 1889	421,851	Bock, L., jr. -----	Feb. 18, 1890
416,006	Moennich, P. -----	Nov. 26, 1889	426,009	Hadlock, W. E. -----	Apr. 22, 1890
417,052	Leibnitz, F. E. -----	Dec. 10, 1889	427,014	Roberts, E. F. -----	Apr. 29, 1890
418,510	Fiske, B. A. -----	Dec. 31, 1889	428,427	Story, R. J. and J. T., Fox, A. E. and Hill, G. J. -----	May 20, 1890
418,871	Holt, G. A. -----	Jan. 7, 1890			
420,057	Haight, H. J. -----	Jan. 28, 1890	428,900	Ehrlich, L. -----	May 27, 1890
420,102	Richard, F. -----	Jan. 28, 1890	430,804	Hollerith, H. -----	June 24, 1890
420,217	Thompson, W. and Gartner, A. -----	Jan. 28, 1890			

177. ELECTRIC SIGNALING.—38. RAILWAY-SIGNALS.

406,057	O'Neil, J. C. -----	July 2, 1889	421,983	Sonders, M. M. -----	Feb. 25, 1890
408,671	Riggs, J. W. -----	Aug. 6, 1889	426,222	Tower, G. A. -----	Apr. 22, 1890
409,146	Grassler, W. F. -----	Aug. 13, 1889	426,395	Rudd, C. H. -----	Apr. 22, 1890
411,742	Fisk, A. B. -----	Sept. 24, 1889	427,387	Winton, H. D. -----	May 6, 1890
412,530	Neu, G. S. -----	Oct. 8, 1889	427,429	Koyle, C. H. and Lattig, J. W. -----	May 6, 1890
413,409	McElroy, D. S. -----	Oct. 22, 1889	427,430	Koyle, C. H. and Lattig, J. W. -----	May 6, 1890
413,410	McElroy, D. S. -----	Oct. 22, 1889	427,762	Haas, J., jr. -----	May 13, 1890
413,412	McElroy, D. S. -----	Oct. 22, 1889	427,783	Morgan, F. E. and Lane, F. A. -----	May 13, 1890
414,645	Kookogey, W. P. -----	Nov. 5, 1889	427,953	De Bailliehaiche, E. J. J. -----	May 13, 1890
414,773	Kookogey, W. P. -----	Nov. 12, 1889	428,041	Conly, M. S. -----	May 13, 1890
416,406	Frith, F. W. -----	Dec. 3, 1889	428,748	Fike, D. M. and Hoffman, J. -----	May 27, 1890
416,713	Conklin, J. I. -----	Dec. 10, 1889	428,970	Stitzel, F. -----	May 27, 1890
417,188	Hunter, J. H. -----	Dec. 10, 1889	429,074	Webb, F. W. and Thompson, A. M. -----	May 27, 1890
417,258	Loy, I. W. and O'Toole, R. -----	Dec. 17, 1889			
418,258	Wiley, E. C. -----	Dec. 31, 1889	429,582	Parrish, H. A. -----	June 3, 1890
418,850	Pendleton, J. H., Bryson, A. J. and Tiers, C. -----	Jan. 7, 1890	429,478	Ramsey, J., jr. and Weir, F. C. -----	June 3, 1890
			429,483	Rudd, C. H. -----	June 3, 1890
418,910	Cox, C. A. and J. F. -----	Jan. 7, 1890	429,899	Firman, L. B. -----	June 10, 1890
420,858	Boss, G. W. -----	Feb. 4, 1890	430,263	Bentley, E. M. -----	June 17, 1890
420,859	Boss, G. W. -----	Feb. 4, 1890	430,637	Gill, E. R., jr. -----	June 24, 1890
421,239	Cable, P. D. -----	Feb. 11, 1890	431,011	Smith, W. J. and Fox, J. W. -----	June 24, 1890
421,791	Walter, W. C. -----	Feb. 18, 1890	431,017	Conly, M. S. -----	June 24, 1890

177. ELECTRIC SIGNALING.—39. RECORDERS.

406,172	Lannert, J. A. -----	July 2, 1889	420,851	Wood, F. B. -----	Feb. 4, 1890
406,809	Wilson, J. C. -----	July 9, 1889	420,852	Wood, F. B. -----	Feb. 4, 1890
409,755	Richards, J. E. -----	Aug. 27, 1889	426,554	Wilson, J. C. -----	Apr. 29, 1890
410,786	Cooper, A. J. and Wigzell, E. F. -----	Sept. 10, 1889	428,075	Church, B. S. -----	May 20, 1890
420,850	Wood, F. B. -----	Feb. 4, 1890			

178. TELEGRAPHY.—46. AUTOMATIC.

406,982	Anderson, F. -----	July 16, 1889	417,407	Cooper, A. S. -----	Dec. 17, 1889
407,460	Anderson, F. -----	July 23, 1889	420,833	Robertson, J. H. -----	Feb. 4, 1890
407,461	Anderson, F. -----	July 23, 1889	425,066	Etheridge, H. -----	Apr. 8, 1890
407,462	Anderson, F. -----	July 23, 1889	425,413	Etheridge, H. -----	Apr. 15, 1890
407,692	Robertson, J. H. -----	July 23, 1889	426,749	Anderson, F. -----	Apr. 29, 1890

178. TELEGRAPHY.—10. CIRCUIT-CLOSERS.

No.	NAME.	DATE.	No.	NAME.	DATE.
412,460	Burton, G. D -----	Oct. 8, 1889	419,487	Wollensak, J. F -----	Jan. 14, 1890
412,845	Elv, G. E -----	Oct. 15, 1889	421,340	Wollensak, J. F -----	Feb. 11, 1890
412,758	Johnston, W. C., jr -----	Oct. 15, 1889	424,182	Dempf, J. A -----	Mar. 25, 1890
416,572	Conz, G. W. M -----	Dec. 3, 1889	424,219	Reed, W. G -----	Mar. 25, 1890
417,742	Prentiss, H. S -----	Dec. 24, 1889			

178. TELEGRAPHY.—45. CIRCUITS AND SYSTEMS.

422,073	Edison, T. A -----	Feb. 25, 1890	426,583	Davis, M. M -----	Apr. 29, 1890
424,006	Davies, C. L -----	Mar. 25, 1890	429,377	English, S. M -----	June 3, 1890

178. TELEGRAPHY.—48. DUPLEX.

422,072	Edison, T. A -----	Feb. 25, 1890	422,074	Edison, T. A -----	Feb. 25, 1890
---------	--------------------	---------------	---------	--------------------	---------------

178. TELEGRAPHY.—50. FIRE.

407,416	Porter, M. D -----	July 23, 1889	418,778	Armstrong, C. G -----	Jan. 7, 1890
408,042	Palmer, D. A -----	July 30, 1889	420,173	Speicher, J -----	Jan. 28, 1890
408,762	Speicher, J -----	Aug. 13, 1889	420,384	Holcombe, A. G -----	Jan. 28, 1890
411,407	Wilson, J. C -----	Sept. 17, 1889	421,853	Bulen, G. F -----	Feb. 18, 1890
412,045	Scribner, J. F -----	Oct. 1, 1889	421,854	Bulen, G. F -----	Feb. 18, 1890
412,971	Milliken, G. F -----	Oct. 15, 1889	421,882	Seiler, P -----	Feb. 18, 1890
413,436	Decrow, W. E -----	Oct. 22, 1889	423,487	McCullough, G. C -----	Mar. 18, 1890
414,868	Morgan, F. E -----	Nov. 12, 1889	424,431	Pearce, F -----	Mar. 25, 1890
415,574	Scribner, C. E -----	Nov. 19, 1889	425,576	Martin, M -----	Apr. 15, 1890
415,629	Foote, G. L -----	Nov. 19, 1889	426,621	Mackenzie, J. U -----	Apr. 29, 1890
416,444	Cooper, T -----	Dec. 3, 1889	426,691	Speicher, J. and Fearey, F. T -----	Apr. 29, 1890
416,483	McMahon, J. P -----	Dec. 3, 1889	427,711	Spike, C. J. and McLeod, H. V -----	May 13, 1890
416,513	Speicher, J -----	Dec. 3, 1889	430,175	Crockett, C. H. and Allen, C. C -----	June 17, 1890
418,322	Rounseville, G. L. B -----	Dec. 31, 1889	430,992	Drake, C. C -----	June 24, 1890

178. TELEGRAPHY.—103. FIRE, ALARMS AND EXTINGUISHERS.

406,629	Coulter, G. A -----	July 9, 1889	424,860	Cox, C. A. and J. F -----	Apr. 1, 1890
410,318	Denio, W. L -----	Sept. 3, 1889	425,039	Singer, W. F -----	Apr. 8, 1890
414,155	Head, C. B -----	Oct. 29, 1889	426,304	McMahon, J. P -----	Apr. 22, 1890
419,710	Robbins, A. C -----	Jan. 21, 1890	426,688	Shaffer, C. H -----	Apr. 29, 1890
419,902	Wider, E -----	Jan. 21, 1890	426,832	Madden, J -----	Apr. 29, 1890
422,236	Smith, W. C -----	Mar. 11, 1890	426,917	Chambers, W. H -----	Apr. 29, 1890
424,743	Weinberg, S. S -----	Apr. 1, 1890	429,318	Ongley, C. E -----	June 3, 1890

178. TELEGRAPHY.—29. KEYS.

406,489	Waldo, H. A -----	July 9, 1889	425,511	Jones, F. W -----	Apr. 15, 1890
411,770	Tebbs, H. S., Lane, N. C. and Coombs, V. -----	Sept. 24, 1889	426,941	Kleber, O -----	Apr. 29, 1890
413,848	Crull, E. S -----	Oct. 29, 1889	427,876	Kaylor, J. S -----	May 13, 1890
			429,982	Waterhouse, E. R -----	June 10, 1890

178. TELEGRAPHY.—30. LIGHTNING ARRESTERS.

407,454	See, J. W -----	July 23, 1889	422,354	Rae, F. B -----	Feb. 25, 1890
409,689	Lemp, H -----	Aug. 27, 1889	423,788	Maxwell, G. S -----	Mar. 18, 1890
413,429	Baker, E. B -----	Oct. 22, 1889	424,562	Loomis, O. P -----	Apr. 1, 1890
414,356	Wirt, C -----	Nov. 5, 1889	424,563	Loomis, O. P -----	Apr. 1, 1890
414,624	Young, C. I -----	Nov. 5, 1889	425,061	Bishop, J. D -----	Apr. 8, 1890
417,694	Winsor, P. and Wurts, A -----	Dec. 17, 1889	426,338	Spear, A. D -----	Apr. 22, 1890
417,695	Winsor, P -----	Dec. 17, 1889	427,540	Bell, L -----	May 13, 1890
418,249	Thomson, E -----	Dec. 31, 1889	427,984	Griffin, C. M -----	May 13, 1890
418,824	Sperry, E. A -----	Jan. 7, 1890	428,653	Thomson, E -----	May 27, 1890
420,096	Pfuger, C. A -----	Jan. 28, 1890	429,727	Lodge, O. J -----	June 10, 1890
420,934	Bayne, G. G -----	Feb. 11, 1890			

178. TELEGRAPHY.—35. MORSE REGISTERS.

No.	NAME.	DATE.	No.	NAME.	DATE.
426,555	Wilson, J. C.-----				Apr. 29, 1890

178. TELEGRAPHY.—51. MULTIPLEX.

411,611	Read, R. H.-----	Sept. 24, 1889	428,222	Patten, F. J.-----	May 20, 1890
411,612	Read, R. H.-----	Sept. 24, 1889	428,223	Patten, F. J.-----	May 20, 1890
420,884	Mercadier, E. J. P.-----	Feb. 4, 1890	428,224	Patten, F. J.-----	May 20, 1890
423,901	Brown, R. G.-----	Mar. 25, 1890	428,225	Patten, F. J.-----	May 20, 1890
423,902	Brown, R. G.-----	Mar. 25, 1890	428,226	Patten, F. J.-----	May 20, 1890
423,903	Brown, R. G.-----	Mar. 25, 1890	429,233	Dickerson, E. N., jr.-----	June 3, 1890
428,221	Patten, F. J.-----	May 20, 1890	429,735	Patten, F. J.-----	June 10, 1890

178. TELEGRAPHY.—54. PRINTING.

406,390	Dewey, M. W.-----	July 2, 1889	420,358	Rogers, J. H.-----	Jan. 28, 1890
407,581	Dewey, M. W.-----	July 23, 1889	422,604	Mahnken, H.-----	Mar. 4, 1890
407,729	Healy, C. L.-----	July 23, 1889	429,115	Burry, J.-----	June 3, 1890
407,730	Healy, C. L.-----	July 23, 1889	429,576	McCoy, A. T.-----	June 3, 1890
426,240	McLaughlin, J. F.-----	Jan. 28, 1890	429,577	McCoy, A. T.-----	June 3, 1890

178. TELEGRAPHY.—55. QUADRUPLIX.

414,492	Carr, C. P.-----	Nov. 5, 1889	424,209	Jones, F. W.-----	Mar. 25, 1890
418,284	Healy, C. L.-----	Dec. 31, 1889	426,591	Jones, F. W.-----	Apr. 29, 1890
420,594	Edison, T. A.-----	Feb. 4, 1890	426,819	Jones, F. W.-----	Apr. 29, 1890

178. TELEGRAPHY.—56. RAILWAY-CAR.

417,438	McElroy, D. S.-----	Dec. 17, 1889	426,522	Burton, G. D.-----	Apr. 29, 1890
419,313	Cade, B.-----	Jan. 14, 1890	427,042	Burton, G. D.-----	May 6, 1890
421,394	Foley, J. S.-----	Feb. 18, 1890	428,562	Houek, T. J.-----	May 20, 1890
425,466	Stevens, W. F.-----	Apr. 15, 1890			

178. TELEGRAPHY.—63. REED.

409,157	Van Rysselberghe, F.-----				Aug. 13, 1889
---------	---------------------------	--	--	--	---------------

178. TELEGRAPHY.—41. RELAYS AND SOUNDERS.

407,480	Healy, C. L.-----	July 23, 1889	418,443	Bunnell, J. H.-----	Dec. 31, 1889
409,675	Field, S. D.-----	Aug. 27, 1889	421,214	White, G. W.-----	Feb. 11, 1890
410,276	Haenichen, F. and O.-----	Sept. 3, 1889	425,597	Delany, P. B.-----	Apr. 15, 1890
417,217	Baker, C. D. and Brouson, L. G.-----	Dec. 17, 1889	426,247	Delany, P. B.-----	Apr. 22, 1890

178. TELEGRAPHY.—42. REPEATERS.

415,417	McIlhenny, R. J.-----	Nov. 19, 1889	423,229	Emery, S. S.-----	Mar. 11, 1890
415,578	Skelton, F. A.-----	Nov. 19, 1889			

178. TELEGRAPHY.—69. TRANSMITTERS.

411,198	Johnson, A. E.-----	Sept. 17, 1889	420,393	Shafer, B. F.-----	Jan. 28, 1890
416,732	La Dow, O. D.-----	Dec. 10, 1889			

179. TELEPHONY.—81. ANTI-INDUCTIVE.

411,137	Campbell, H. F.-----	Sept. 17, 1889	417,305	Wilson, J. C.-----	Dec. 17, 1889
413,707	Campbell, H. F.-----	Oct. 29, 1889	417,402	Balsley, U. H.-----	Dec. 17, 1889
413,795	Stockwell, J. O. and Barrett, A.-----	Oct. 29, 1889	417,511	Rosebrugh, A. M. and T. R.-----	Dec. 17, 1889
417,304	Wilson, J. C.-----	Dec. 17, 1889	422,577	Edison, T. A. and Gilliland, E. T.-----	Mar. 4, 1890

179. TELEPHONY.—57. TELEPHONES—CALLS.

No.	NAME.	DATE.	No.	NAME.	DATE.
408,224	Eddy, W.-----	Aug. 6, 1889	424,635	Wood, F. B.-----	Apr. 1, 1890
408,468	Dunlap, J. W., sr.-----	Aug. 6, 1889	425,594	Currier, J. B.-----	Apr. 15, 1890
414,085	Schneider, F. W. A.-----	Oct. 29, 1889	425,630	Rice, D. H.-----	Apr. 15, 1890
416,754	Sack, J.-----	Dec. 10, 1889	425,631	Rice, D. H.-----	Apr. 15, 1890
420,255	Taylor, J. D.-----	Jan. 28, 1890	426,989	Cutler, J. L.-----	Apr. 29, 1890
421,371	Cutler, J. L.-----	Feb. 11, 1890	430,607	Alexander, W. W.-----	June 24, 1890
422,722	Carpenter, H. L.-----	Mar. 4, 1890	430,608	Alexander, W. W.-----	June 24, 1890
423,575	Sack, J.-----	Mar. 18, 1890	430,636	Gill, E. R., jr.-----	June 24, 1890

179. TELEPHONY.—58. TELEPHONES—DETAILS.

406,567	Edison, T. A.-----	July 9, 1889	421,800	Whitney, R. W. and Cowles, B. K.-----	Feb. 18, 1890
412,234	Blake, R.-----	Oct. 8, 1889	422,174	Bartlett, S. H. and Waite, H. E.-----	Feb. 25, 1890
417,660	Barney, W. C.-----	Dec. 17, 1889	423,299	Wolf, J. J.-----	Mar. 11, 1890
421,011	Newland, G. F.-----	Feb. 11, 1890	430,913	Bell, E. B.-----	June 24, 1890

179. TELEPHONY.—59. TELEPHONES—ELECTRIC.

410,305	Wheless, M.-----	Sept. 3, 1889	416,476	Lyon, E. H.-----	Dec. 3, 1889
412,579	Abdank-Abakanowicz, A.-----	Oct. 8, 1889	417,009	Eichemeyer, J. C.-----	Dec. 10, 1889
412,580	Abdank-Abakanowicz, A.-----	Oct. 8, 1889	427,204	Stut, J. C. H.-----	May 6, 1890
412,885	Heydler, E. F.-----	Oct. 15, 1889	430,128	Irwin, J. H.-----	June 17, 1890

179. TELEPHONY.—60. TELEPHONES—MAGNETIC.

407,799	Trowbridge, J. and Sheldon, S.-----	July 30, 1889	421,006	Libbey, H. W.-----	Feb. 11, 1890
409,736	D'Unger, R.-----	Aug. 27, 1889	428,174	Ludwig, J. C.-----	May 20, 1890
413,308	Selden, C.-----	Oct. 22, 1889	429,129	Ginochio, N. B.-----	June 3, 1890
415,700	Bonta, J. W.-----	Nov. 26, 1889	429,801	Voegel, W.-----	June 10, 1890

179. TELEPHONY.—77. TELEPHONES—RELAYS AND REPEATERS.

422,578	Edison, T. A.-----	Mar. 4, 1890	422,579	Edison, T. A.-----	Mar. 4, 1890
---------	--------------------	--------------	---------	--------------------	--------------

179. TELEPHONY.—100. TELEPHONES—SUPPORTS.

407,004	Fisk, N. S.-----	July 16, 1889	414,132	Adams, S. J.-----	Oct. 29, 1889
410,059	Wolf, J. J.-----	Aug. 27, 1889	414,961	Wilson, H. M.-----	Nov. 12, 1889
411,588	Dickson, C. T.-----	Sept. 24, 1889	418,682	Christie, G. E.-----	Jan. 7, 1890

179. TELEPHONY.—85. TELEPHONES—SWITCH-BOARDS.

412,818	Wood, J. J.-----	Oct. 15, 1889	424,995	Owen, E. A.-----	Apr. 8, 1890
413,083	McLaughlin, J. F.-----	Oct. 15, 1889	427,622	Scribner, C. E.-----	May 13, 1890
421,114	Stewart, W. M.-----	Feb. 11, 1890			

179. TELEPHONY.—71. TELEPHONES—SWITCHES.

421,636	Titus, E. C.-----	Feb. 18, 1890	425,963	Warner, E. P.-----	Apr. 15, 1890
425,053	Warner, E. P.-----	Apr. 8, 1890			

179. TELEPHONY.—64. TELEPHONES—SYSTEMS.

408,709	Gray, W.-----	Aug. 13, 1889	416,809	Scribner, C. E.-----	Dec. 10, 1889
409,574	Gould, C. C.-----	Aug. 20, 1889	417,018	Goodridge, W. M.-----	Dec. 10, 1889
413,276	Farnham, I. H.-----	Oct. 22, 1889	417,271	O'Connell, J. J.-----	Dec. 17, 1889
414,310	Haskins, C. D. and Scribner, C. E.-----	Nov. 5, 1889	419,645	Culbertson, J. N.-----	Jan. 21, 1890
415,573	Scribner, C. E.-----	Nov. 19, 1889	420,091	O'Connell, J. J.-----	Jan. 28, 1890
415,765	Carty, J. J.-----	Nov. 26, 1889	420,183	Beach, F. G. and Cook, F. B.-----	Jan. 28, 1890
416,275	Scribner, C. E.-----	Dec. 3, 1889	422,765	Gould, C. C.-----	Mar. 4, 1890
416,808	Scribner, C. E.-----	Dec. 10, 1889	424,310	Kellogg, M. G.-----	Mar. 25, 1890

179. TELEPHONY.—64. TELEPHONES—SYSTEMS—Continued.

No.	NAME.	DATE.	No.	NAME.	DATE.
424,993	McCluer, C. E -----	Apr. 8, 1890	427,208	Waters, B. E -----	May 6, 1890
425,086	Robertson, J. H -----	Apr. 8, 1890	427,621	Scribner, C. E -----	May 13, 1890
425,161	Cassard, H. L -----	Apr. 8, 1890	427,623	Scribner, C. E -----	May 13, 1890
425,853	Berne, A. W -----	Apr. 15, 1890	427,624	Scribner, C. E -----	May 13, 1890
425,862	Carty, J. J -----	Apr. 15, 1890	427,742	Carty, J. J -----	May 13, 1890
425,863	Carty, J. J -----	Apr. 15, 1890	427,917	Scribner, C. E -----	May 13, 1890
426,266	Gray, W -----	Apr. 22, 1890	427,974	Crossley, L. J., Emmott, W. and Harrison, J. F.	May 13, 1890
427,087	Kellogg, M. G -----	May 6, 1890	428,189	Warner, E. P -----	May 20, 1890
427,120	Scribner, C. E -----	May 6, 1890	428,698	Scribner, C. E -----	May 27, 1890
427,121	Scribner, C. E -----	May 6, 1890	430,569	Dowst, S. M. and Hosmer, F. H.	June 17, 1890
427,123	Scribner, C. E -----	May 6, 1890	430,747	O'Connell, J. J -----	June 24, 1890
427,194	Scribner, C. E -----	May 6, 1890	430,748	O'Connell, J. J -----	June 24, 1890
427,154	Carty, J. J -----	May 6, 1890	430,960	Kitsee, I -----	June 24, 1890
427,155	Carty, J. J -----	May 6, 1890			
427,156	Carty, J. J -----	May 6, 1890			

179. TELEPHONY.—101. TELEPHONES—SYSTEMS, AUTOMATIC.

408,327	Smith, J. R -----	Aug. 6, 1889
---------	-------------------	--------------

191. ELECTRIC RAILWAYS.—1. CONDUCTOR SUPPORTS AND INSULATORS.

427,878	Kilian, C. J -----	May 13, 1890	429,316	Maequesten, W. D -----	June 3, 1890
428,930	Morris, E. P -----	May 27, 1890	430,690	Robinson, W -----	June 24, 1890
429,058	Pierce, H. I -----	May 27, 1890	430,926	Davis, W. M -----	June 24, 1890
429,315	Maequesten, W. D -----	June 3, 1890			

191. ELECTRIC RAILWAYS.—2. ELECTRIC LOCOMOTIVES.

428,175	McLaughlin, J. F -----	May 20, 1890	429,327	Spragne, F. J -----	June 3, 1890
428,210	Hunter, R. M -----	May 20, 1890	429,687	Hunter, R. M -----	June 10, 1890
428,669	Dummer, E -----	May 27, 1890	429,746	Van Depoele, C. J -----	June 10, 1890
428,917	Ingraham, A. A -----	May 27, 1890	430,147	Pfingst, L -----	June 17, 1890
429,107	Allen, R. N -----	June 3, 1890	430,686	Rae, F. B -----	June 24, 1890
429,314	Macquesten, W. D -----	June 3, 1890			

191. ELECTRIC RAILWAYS.—5. SYSTEMS—CONDUITS.

429,025	Hunter, R. M -----	June 10, 1890	11,084	Knight, W. H -----	June 10, 1890
430,515	Devore, D. B -----	June 17, 1890			

191. ELECTRIC RAILWAYS.—6. SYSTEMS—CLOSED CONDUIT.

427,746	Cordley, W. J -----	May 13, 1890
---------	---------------------	--------------

191. ELECTRIC RAILWAYS.—7. SYSTEMS—CIRCUITS, MULTIPLE ARC.

427,541	Bell, L -----	May 13, 1890	430,208	Hunter, R. M -----	June 17, 1890
429,981	Van Depoele, C. J -----	June 10, 1890	430,329	Wightman, M. J -----	June 17, 1890
430,076	Hunter, R. M -----	June 10, 1890	11,083	Knight, W. H -----	June 10, 1890

191. ELECTRIC RAILWAYS.—11. SYSTEMS—OVERHEAD.

429,093	Hunter, R. M -----	May 27, 1890	429,199	Macquesten, W. D -----	June 3, 1890
---------	--------------------	--------------	---------	------------------------	--------------

191. ELECTRIC RAILWAYS.—12. SYSTEMS—OVERHEAD, TROLLEYS.

427,628	Short, S. H -----	May 13, 1890	430,580	Hunter, R. M -----	June 17, 1890
429,113	Brown, B. F -----	June 3, 1890	430,675	Nelson, D. C. and Eaton, W. R.	June 24, 1890
429,413	Blauvelt, W. S -----	June 3, 1890			

191. ELECTRIC RAILWAYS.—13. SYSTEMS—TELPHER.

No.	NAME.	DATE.	No.	NAME.	DATE.
429,747	Van Depoele, C. J				June 10, 1890

2. APPAREL.—4. CUTTING.

11,019	Nevens, F. W	Aug. 6, 1889	425,572	Hofheimer, M	Apr. 15, 1890
--------	--------------	--------------	---------	--------------	---------------

4. BATHS AND CLOSETS.—5. CLOSET CISTERNS.

407,746	Stevens, J. W				July 23, 1889
---------	---------------	--	--	--	---------------

4. BATHS AND CLOSETS.—12. URINALS.

416,131	Weeden, H. C	Nov. 26, 1889	416,138	Weeden, H. C	Nov. 26, 1889
---------	--------------	---------------	---------	--------------	---------------

48. GAS.—13. OIL GAS.

418,550	Burt, M. C	Dec. 31, 1889	429,675	Burt, M. C	June 10, 1890
418,551	Burt, M. C	Dec. 31, 1889			

14. BRIDGES.—2. FERRY GUARDS.

408,778	Wellman, H. P				Aug. 13, 1889
---------	---------------	--	--	--	---------------

14. BRIDGES.—3. GIRDERS AND COLUMNS.

414,686	Dunn, P. J	Nov. 12, 1889	425,071	Green, L. R	Apr. 8, 1890
415,324	Green, L. R	Nov. 19, 1889	428,145	Ruttan, H. W	May 20, 1890
415,325	Green, L. R	Nov. 19, 1889	429,067	Simmons, C. H	May 27, 1890

14. BRIDGES.—10. TOWERS.

423,632	Rothenberg, W. F				Mar. 18, 1890
---------	------------------	--	--	--	---------------

18. CAOUTCHOUC AND MINOR PLASTICS.—7. MISCELLANEOUS COMPOSITIONS.

415,962	Enholm, O. A				Nov. 26, 1889
---------	--------------	--	--	--	---------------

18. CAOUTCHOUC AND MINOR PLASTICS.—11. INSULATING MATERIALS.

407,896	Marquard, F	July 30, 1889	425,615	Knudson, A. A	Apr. 15, 1890
407,938	Marquard, F	July 30, 1889	426,202	Munsie, J. F	Apr. 22, 1890
415,864	Gilson, S. H	Nov. 26, 1889			

21. CARRIAGES AND WAGONS.—67. VELOCIPEDES.

426,384	Jasper, W				Apr. 22, 1890
---------	-----------	--	--	--	---------------

22. METAL FOUNDED.—16. IN METAL MOLDS—SOFT METALS.

413,309	Shapleigh, W	Oct. 22, 1889	415,332	Payen, C	Nov. 19, 1889
---------	--------------	---------------	---------	----------	---------------

23. CHEMICALS.—27. ELECTROLYSIS.

No.	NAME.	DATE.	No.	NAME.	DATE.
415,644	Kerner, G. and Marx, J -----	Nov. 19, 1889	422,500	Castner, H. Y -----	Mar. 4, 1890

23. CHEMICALS.—10. METALLOIDS.

409,903	De Vars, H. A. B. H -----				Aug. 27, 1889
---------	---------------------------	--	--	--	---------------

25. CLAY AND POTTERY.—2. BRICK KILNS.

409,489	Mungesser, P. P -----	Aug. 20, 1889	409,490	Mungesser, P. P -----	Aug. 20, 1889
---------	-----------------------	---------------	---------	-----------------------	---------------

25. CLAY AND POTTERY.—8. DRAIN TILES.

429,844	Culver, J. P -----				June 10, 1890
---------	--------------------	--	--	--	---------------

28. CORDAGE.—5. CORDS AND ROPES.

416,189	Stone, J. B -----				Dec. 3, 1889
---------	-------------------	--	--	--	--------------

28. CORDAGE.—6. COVERING CORD.

411,900	McCahey, J -----	Oct. 1, 1889	420,777	Davis, F. E. and Scott, J., jr---	Feb. 4, 1890
413,629	Phillips, W. A -----	Oct. 22, 1889	425,990	Davis, F. E. and Scott, J., jr---	Apr. 22, 1890
416,254	Cooley, C. A -----	Dec. 3, 1889	428,201	Davis, F. E. and Scott, J., jr---	May 20, 1890

28. CORDAGE.—14. WARPING.

424,997	Prest, J. E -----	Apr. 8, 1890	428,772	Goldshmidt, P -----	May 27, 1890
---------	-------------------	--------------	---------	---------------------	--------------

32. DENTISTRY.—2. DRILLS.

423,344	Retter, A -----				Mar. 11, 1890
---------	-----------------	--	--	--	---------------

38. FELTING AND HAT MAKING.—11. FULLING.

428,026	Taylor, F. C. and Hurd, J. R -----				May 13, 1890
---------	------------------------------------	--	--	--	--------------

38. FELTING AND HAT MAKING.—12. FURS AND PELTS.

408,879	Hedbavny, A -----				Aug. 13, 1889
---------	-------------------	--	--	--	---------------

39. FENCES.—38. RAILWAY GATES—ELECTRIC.

423,886	Toulmin, M -----				Mar. 18, 1890
---------	------------------	--	--	--	---------------

39. FENCES.—9. FENCES—WIRE.

428,123	Morrison, D. B -----				May 20, 1890
---------	----------------------	--	--	--	--------------

40. ADVERTISING.—2. AUTOMATIC DEVICES.

420,351	Music, G -----				Jan. 28, 1890
---------	----------------	--	--	--	---------------

41. FINE ARTS.—8. ENGRAVING MACHINES.

No.	NAME.	DATE.	No.	NAME.	DATE.
409,026	Eaton, W. S.-----	Aug. 13, 1889	428,770	Field, C. H.-----	May 27, 1890
425,929	Bruckner, C. C. and Baleck, S. W.	Apr. 13, 1890			

42. FIRE ARMS.—1. AIR AND SPRING GUNS.

429,594	Bartlett, W. A.-----				June 10, 1890
---------	----------------------	--	--	--	---------------

42. FIRE ARMS.—20. SIGHTS.

429,030	Greenfell, H. H.-----				May 27, 1890
---------	-----------------------	--	--	--	--------------

42. FIRE ARMS.—25. BALL TRAPS.

428,030	Wolstencroft, J. and Soley, W. H.-----				May 13, 1890
---------	--	--	--	--	--------------

46. GAMES AND TOYS.—41. PUZZLES AND MAGIC.

417,931	Miatt, G. W.-----				Dec. 24, 1889
---------	-------------------	--	--	--	---------------

50. REGULATORS.—1. GAS—FLUID PRESSURE.

411,041	King, A. S. and Swaney, W. H.-----				Sept. 17, 1889
---------	------------------------------------	--	--	--	----------------

55. HARDWARE MAKING.—9. MISCELLANEOUS.

414,238	Carpenter, H. H.-----	Nov. 5, 1889	429,049	McLaughlin, J. F.-----	May 27, 1890
---------	-----------------------	--------------	---------	------------------------	--------------

57. HOISTING.—29. ENDLESS BELTS.

410,185	Page, W. N.-----				Sept. 3, 1889
---------	------------------	--	--	--	---------------

58. HOROLOGY.—15. TIME ALARMS.

406,769	Reams, A. J.-----	July 9, 1889	428,854	McCuskey, J. L.-----	May 27, 1890
425,004	Schnitz, R.-----	Apr. 8, 1890			

58. HOROLOGY.—16. TIME CHECKS.

417,501	Norton, H. L. and Cooke, F. W.	Dec. 17, 1889	428,533	Egan, C. E. and Gray, H. F.---	May 20, 1890
424,268	Carr, R. B.-----	Mar. 25, 1890	429,360	McLaughlin, J. F.-----	June 3, 1890

58. HOROLOGY.—18. WATCH BALANCES.

406,364	Mason, C. T.-----	July 2, 1889	422,616	Olney, W. D.-----	Mar. 4, 1890
---------	-------------------	--------------	---------	-------------------	--------------

58. HOROLOGY.—28. CLOCKS—ELECTRIC.

407,945	Speer, A.-----	July 30, 1889	417,753	Spellier, L. H.-----	Dec. 24, 1889
408,346	Pond, C. H.-----	Aug. 13, 1889	417,927	Lane, F. A.-----	Dec. 24, 1889
410,013	Parcelle, A. L.-----	Aug. 27, 1889	417,928	Lane, F. A.-----	Dec. 24, 1889
411,133	Carter, C. H.-----	Sept. 17, 1889	418,125	Hamblet, J.-----	Dec. 24, 1889
411,168	Pond, C. H.-----	Sept. 17, 1889	419,776	Jones, A. B.-----	Jan. 21, 1890
413,281	Hussey, M. L. M.-----	Oct. 22, 1889	424,273	Colby, E. A. and Strong, J. C.	Mar. 25, 1890
413,340	Gerry, J. H.-----	Oct. 22, 1889	424,929	Lindenau, E. W.-----	Apr. 1, 1890
415,817	Lane, F. A.-----	Nov. 26, 1889	428,676	Karr, H. C.-----	May 27, 1890
416,148	Slocum, E. L.-----	Nov. 26, 1889	429,396	Ward, C. A.-----	June 3, 1890

65. KITCHEN AND TABLE ARTICLES.—15. DISHES AND PLATES.

No.	NAME.	DATE.	No.	NAME.	DATE.
425,768	Ezell, F -----				Apr. 15, 1890

66. KNITTING AND NETTING.—7. STOPPING.

408,829	Cumnock, V. I -----	Aug. 13, 1889	424,295	Kaslau, J. P -----	Mar. 25, 1890
414,025	Cumnock, V. I -----	Oct. 29, 1889			

67. LAMPS AND GAS FITTINGS.—1. CANDLESTICKS.

430,487	Sholder, L. H -----				June 17, 1890
---------	---------------------	--	--	--	---------------

67. LAMPS AND GAS FITTINGS.—3. CHANDELIERS.

407,593	Hollings, J. C -----	July 23, 1889	422,811	Lemaire, P. C. J -----	Mar. 4, 1890
---------	----------------------	---------------	---------	------------------------	--------------

67. LAMPS AND GAS FITTINGS.—5. DROP LIGHTS AND HANGERS.

11,067	Griswold, L. F -----	Mar. 18, 1890	416,368	Jordan, L. F -----	Dec. 3, 1889
407,973	Thompson, A. T -----	July 30, 1889	416,447	Dawson, E. C -----	Dec. 3, 1889
409,852	Merrill, J. S -----	Aug. 27, 1889	422,591	Hayden, W. W. and Dickeman, C. S.	Mar. 4, 1890
412,713	Sayers, W. B. and Sturge, W. H.	Oct. 8, 1889			
414,798	Dawes, A -----	Nov. 12, 1889	426,778	Dalton, J -----	Apr. 29, 1890
415,896	Bradner, W. F -----	Nov. 26, 1889	428,723	Jeffers, C. L -----	May 27, 1890
415,897	Bradner, W. F -----	Nov. 26, 1889	428,929	Morris, E. P -----	May 27, 1890

67. LAMPS AND GAS FITTINGS.—6. EXTINGUISHERS—GAS.

417,101	Siersdorfer, M -----				Dec. 10, 1889
---------	----------------------	--	--	--	---------------

67. LAMPS AND GAS FITTINGS.—21. LAMP POSTS.

426,660	Carroll, W -----				Apr. 29, 1890
---------	------------------	--	--	--	---------------

67. LAMPS AND GAS FITTINGS.—22. LAMP SHADES.

409,928	Coe, B. L -----	Aug. 27, 1889	419,524	Huber, J. H -----	Jan. 14, 1890
415,628	Farmer, J. R -----	Nov. 19, 1889	422,592	Holman, F -----	Mar. 4, 1890
416,682	Laurence, W. B -----	Dec. 3, 1889	427,951	Atterbury, T. B -----	May 13, 1890
416,745	Rice, E. W., jr -----	Dec. 10, 1889	428,989	Wilson, W. H -----	May 27, 1890
419,186	Culman, D. A., jr -----	Jan. 14, 1890			

67. LAMPS AND GAS FITTINGS.—26. LOCOMOTIVE HEAD LIGHTS.

415,252	McDonald, R. T. and Cain, J -----				Nov. 19, 1889
---------	-----------------------------------	--	--	--	---------------

67. LAMPS AND GAS FITTINGS.—28. REFLECTORS.

412,089	Hawkes, T. G -----				Oct. 1, 1889
---------	--------------------	--	--	--	--------------

67. LAMPS AND GAS FITTINGS.—29. STREET LAMPS.

411,443	Hyman, D -----	Sept. 24, 1889	426,155	Warner, E. P -----	Apr. 22, 1890
414,933	Adams, F. U -----	Nov. 12, 1889	427,986	Gwynn, J. W -----	May 13, 1890
420,139	Barringer, J. J. and Johnston, T. H.	Jan. 28, 1890			

67. LAMPS AND GAS FITTINGS.—51. GAS BURNERS—INCANDESCENT.

No.	NAME.	DATE.	No.	NAME.	DATE.
423,317	Heald, A -----				Mar. 11, 1890

68. LAUNDRY.—30. WASH BOILERS.

430,486	Rose, H. J. F -----				June 17, 1890
---------	---------------------	--	--	--	---------------

72. MASONRY.—7. IRON STRUCTURES.

411,805	Gaynor, T. F -----				Oct. 1, 1889
---------	--------------------	--	--	--	--------------

73. MEASURING INSTRUMENTS.—53. VOTING MACHINES.

429,330	Wilkins, T. M. and Reid, A. H-----				June 3, 1890
---------	------------------------------------	--	--	--	--------------

74. MACHINE ELEMENTS.—7. GEARING.

416,090	Best, A. W. and Underwood, H. G-----				Nov. 26, 1889
---------	--------------------------------------	--	--	--	---------------

75. METALLURGY.—1. ALLOYS.

403,130	Ostermann, H. and Lacroix, C-----	July 30, 1889	413,438	Eggers, F. F-----	Oct. 22, 1889
408,182	Knowles, E. R-----	July 30, 1889			

75. METALLURGY.—15. LEAD.

415,330	Payen, C-----	Nov. 19, 1889	415,349	Payen, C-----	Nov. 19, 1889
415,347	Payen, C-----	Nov. 19, 1889	415,683	Payen, C-----	Nov. 19, 1889
415,348	Payen, C-----	Nov. 19, 1889			

75. METALLURGY.—17. REDUCING AND SEPARATING.

418,134	Julian, H. F -----	Dec. 24, 1889	428,552	Colby, E. A -----	May 20, 1890
423,378	Colby, E. A -----	May 20, 1890	430,453	Willson, T. L-----	June 17, 1890
423,379	Colby, E. A -----	May 20, 1890			

75. METALLURGY.—67. CHLORINATION—SOLUTION AND PRECIPITATION.

407,336	Wiswell, J. C-----	July 23, 1889	410,228	Wiswell, J. C-----	Sept. 3, 1889
---------	--------------------	---------------	---------	--------------------	---------------

75. METALLURGY.—68. SOLUTION AND PRECIPITATION—ELECTROLYSIS.

410,976	Kerner, G. and Marx, J -----	Sept. 10, 1889	415,738	Seegall, H. R-----	Nov. 26, 1889
415,576	Siemens, W -----	Nov. 19, 1889	429,386	Parrish, M. W-----	June 3, 1890

83. MILLS.—16. GRINDING MILLS—GRIST ALARMS.

410,502	Donner, W. H -----	Sept. 3, 1889	410,270	Donner, W. H -----	Sept. 3, 1889
---------	--------------------	---------------	---------	--------------------	---------------

84. MUSIC.—20. ORGAN-BELLOWS.

407,302	Votey, E. S -----				July 30, 1889
---------	-------------------	--	--	--	---------------

84. MUSIC.—37. SELF-PLAYING INSTRUMENTS.

No.	NAME.	DATE.	No.	NAME.	DATE.
407,801	Votey, E. S-----	July 30, 1889	412,657	Pain, R. W-----	Oct. 8, 1889

84. MUSIC.—51. SELF-PLAYING INSTRUMENTS—PNEUMATIC.

417,680	Pain, R. W-----	Dec. 17, 1889
---------	-----------------	---------------

84. MUSIC.—81. ELECTRIC ACTIONS.

429,066	Case, J. D. and Evans, C. W---	June 10, 1890	430,065	Case, J. D. and Evans, C. W---	June 10, 1890
---------	--------------------------------	---------------	---------	--------------------------------	---------------

73. MEASURING INSTRUMENTS.—5. BATHOMETERS.

418,889	Cooper, A. J. and Wigzell, E. E-----	Jan. 7, 1890
---------	--------------------------------------	--------------

73. MEASURING INSTRUMENTS.—17. GAME COUNTERS.

409,937	Devlin, T. C-----	Aug. 27, 1889
---------	-------------------	---------------

73. MEASURING INSTRUMENTS.—34. RECORDERS.

409,891	Wills, J-----	Aug. 27, 1889
---------	---------------	---------------

73. MEASURING INSTRUMENTS.—35. REGISTERS.

413,207	Pforzheimer, J-----	Oct. 22, 1889
---------	---------------------	---------------

73. MEASURING INSTRUMENTS.—38. SACK SCALES.

410,886	Gill, O. A-----	Sept. 10, 1889
---------	-----------------	----------------

73. MEASURING INSTRUMENTS.—39. SCALE BEAMS.

413,331	Snelgrove, W-----	Oct. 22, 1889
---------	-------------------	---------------

73. MEASURING INSTRUMENTS.—43. SPEED MEASURES.

410,023	Richard, F-----	Aug. 27, 1889
---------	-----------------	---------------

73. MEASURING INSTRUMENTS.—46. SPRING SCALES.

422,876	Bower, J. F-----	Mar. 4, 1890
---------	------------------	--------------

73. MEASURING INSTRUMENTS.—65. THERMOSTATS.

406,775	Sautter, C. F-----	July 9, 1889	414,267	Thompson, H. E-----	Nov. 5, 1889
409,316	Butz, A. M-----	Aug. 20, 1889	415,007	Thompson, D. W-----	Nov. 12, 1889
409,996	Meyer, M-----	Aug. 27, 1889	421,852	Bulen, G. F-----	Feb. 18, 1890
411,311	Ware, E. R-----	Sept. 17, 1889	424,363	Singer, W. F-----	Mar. 25, 1890
412,013	Beebe, E. W-----	Oct. 1, 1889	425,625	Parker, E. A-----	Apr. 15, 1890
412,115	Nix, J. L-----	Oct. 1, 1889	430,633	Easton, L. F-----	June 24, 1890
413,568	Shaffer, C. H-----	Oct. 22, 1889			

73. MEASURING INSTRUMENTS.—82. WATER GAGES—FLOAT.

No.	NAME.	DATE.	No.	NAME.	DATE.
423,680	Fuller, J. A -----				Mar. 18, 1890

73. MEASURING INSTRUMENTS.—85. TELETHERMOMETERS.

415,758	Wiesebroek, F. W. and Huber, E. -----				Nov. 26, 1889
---------	---------------------------------------	--	--	--	---------------

76. METAL TOOLS AND IMPLEMENTS, MAKING.—24. TOOLS AND IMPLEMENTS.

430,094	Spencer, A. D. -----				June 10, 1890
---------	----------------------	--	--	--	---------------

88. OPTICS.—4. KALEIDOSCOPES.

416,092	Clawson, C. C. -----				Nov. 26, 1889
---------	----------------------	--	--	--	---------------

88. OPTICS.—19. COMPASSES.

413,250	Farciot, C. O. -----				Oct. 22, 1889
---------	----------------------	--	--	--	---------------

89. ORDNANCE.—12. OPERATING ORDNANCE.

407,487	Maxim, H. S. -----				July 23, 1889
---------	--------------------	--	--	--	---------------

89. ORDNANCE.—21. ELECTRIC APPLIANCES.

411,831	Nordenfelt, T. -----				Oct. 1, 1889
---------	----------------------	--	--	--	--------------

93. PAPER MANUFACTURES.—17. FEEDING.

415,877	Mont-Ross, J. A. -----				Nov. 26, 1889
---------	------------------------	--	--	--	---------------

95. PHOTOGRAPHY.—4. BURNISHING PRESSES.

412,462	Carley, C. R. -----				Oct. 8, 1889
---------	---------------------	--	--	--	--------------

95. PHOTOGRAPHY.—5. CAMERAS.

421,484	Davis, G. E. -----	Feb. 18, 1890	429,705	Steffens, M. J. -----	June 10, 1890
---------	--------------------	---------------	---------	-----------------------	---------------

95. PHOTOGRAPHY.—30. COMBINED APPARATUS.

406,299	Overpeck, L. C. -----				July 2, 1889
---------	-----------------------	--	--	--	--------------

96. COATING WITH METAL.—1. ELECTRO-DEPOSITION.

414,860	Dunlap, W. A. -----	Nov. 12, 1889	426,789	Farmer, M. G. -----	Apr. 29, 1890
415,024	Coffin, C. C. -----	Nov. 12, 1889	427,513	Hollingshead, W. B. -----	May 6, 1890
423,101	Winslow, W. H. -----	Mar. 11, 1890	428,087	Garrett, D. -----	May 20, 1890
426,788	Farmer, M. G. -----	Apr. 29, 1890			

98. PNEUMATICS.—27. AUTOMATIC FANS.

421,014	Polk, W. R. -----				Feb. 11, 1890
---------	-------------------	--	--	--	---------------

CLASSIFIED INDEX—ELECTRICITY.

98. PNEUMATICS.—32. AIR AND GAS PUMPS.

No.	NAME.	DATE.	No.	NAME.	DATE.
422,219	Jaeger, H. J				Feb. 25, 1890

98. PNEUMATICS.—33. AIR-PUMPS, MERCURY.

406,231	Nicolaus, E. B				July 2, 1889
---------	----------------	--	--	--	--------------

101. PRINTING.—6. CARD AND TAG—TICKETS.

410,555	Milliken, J. A. and C. H. and D'Amour, E				Sept. 3, 1889
---------	--	--	--	--	---------------

101. PRINTING.—20. HAND STAMPS.

419,068	Randall, C. A				Jan. 7, 1890
---------	---------------	--	--	--	--------------

101. PRINTING.—42. TYPE-WRITING.

406,291	McLaughlin, J. F	July 2, 1889	422,614	Nolan, E. J	Mar. 4, 1890
406,292	McLaughlin, J. F	July 2, 1889	427,680	Goodson, G. A	May 13, 1890
409,613	McLaughlin, J. F	Aug. 20, 1889	429,359	McLaughlin, J. F	June 3, 1890

101. PRINTING.—44. MATRIX MAKING.

414,399	Goodson, G. A	Nov. 5, 1889	418,295	Redfield, C. L	Dec. 31, 1889
414,400	Goodson, G. A	Nov. 5, 1889	427,681	Goodson, G. A	May 13, 1890
416,742	Redfield, C. L	Dec. 10, 1889	429,742	Redfield, C. L	June 10, 1890
416,743	Redfield, C. L	Dec. 10, 1889			

101. PRINTING.—32. SETTING AND DISTRIBUTING.

412,606	Dow, L	Oct. 8, 1889	418,664	Dreyer, W	Dec. 31, 1889
---------	--------	--------------	---------	-----------	---------------

102. PROJECTILES.—1. BLASTING AND FUSES.

424,442	Wood, W. M	Mar. 25, 1890	426,971	Firmann, H	Apr. 29, 1890
---------	------------	---------------	---------	------------	---------------

104. RAILWAYS.—10. RAILS.

425,965	Weems, D. G				Apr. 15, 1890
---------	-------------	--	--	--	---------------

104. RAILWAYS.—39. INTERLOCKING.

413,261	Mozier, A. M	Oct. 22, 1889	415,168	Hambery, J. T	Nov. 12, 1889
---------	--------------	---------------	---------	---------------	---------------

104. RAILWAYS.—47. TRACTION—UNDERGROUND.

409,926	Clement, L. M. and Waters, G. C	Aug. 27, 1889	414,681	Culver, F. E	Nov. 12, 1889
---------	---------------------------------	---------------	---------	--------------	---------------

104. RAILWAYS.—72. AUTOMATIC SIGNAL-SETTING APPARATUS.

428,576	Stitzel, F. and Weinedel, C				May 20, 1890
---------	-----------------------------	--	--	--	--------------

104. RAILWAYS.—94. AUTOMATIC SIGNALS.

No.	NAME.	DATE.	No.	NAME.	DATE.
417,525	Stitzel, F-----	Dec. 17, 1889	417,526	Stitzel, F. and Weinedel, C----	Dec. 17, 1889

105. RAILWAY CARS.—4. AXLES.

420,545	Peckham, E-----	Feb. 4, 1890
---------	-----------------	--------------

105. RAILWAY CARS.—6. BRAKES.

413,960	Pfingst, L-----	Oct. 29, 1889
---------	-----------------	---------------

105. RAILWAY CARS.—19. PASSENGER CARS.

415,617	Cody, J. L-----	Nov. 19, 1889
---------	-----------------	---------------

105. RAILWAY CARS.—28. STREET CARS—STEAM.

408,233	Griscom, W. W-----	Aug. 6, 1889	424,371	Stephenson, J-----	Mar. 25, 1890
419,355	Pullman, A. B-----	Jan. 14, 1890	424,372	Stephenson, J-----	Mar. 25, 1890
420,543	Peckham, E-----	Feb. 4, 1890	424,373	Stephenson, J-----	Mar. 25, 1890

105. RAILWAY CARS.—31. STREET CARS.

420,544	Peckham, E-----	Feb. 4, 1890
---------	-----------------	--------------

105. RAILWAY CARS.—32. TRUCKS.

410,871	Bemis, S. A. and Pfingst, L----	Sept. 10, 1889	424,062	Hazard, R. R-----	Mar. 25, 1890
413,890	Bemis, S. A-----	Oct. 29, 1889	427,966	Brill, G. M. and J. A-----	May 13, 1890

113. SHEET METAL WARE MAKING.—6. SOLDERING CLAMPS.

415,305	Thomson, E. and Tregoning, J-----	Nov. 19, 1889
---------	-----------------------------------	---------------

114. SHIPS.—40. SUBMARINE AND TORPEDO.

423,405	Barton, S-----	Mar. 11, 1890
---------	----------------	---------------

116. SIGNALS.—13. FOG SIGNALS.

424,544	Donnelly, A. G-----	Apr. 1, 1890
---------	---------------------	--------------

116. SIGNALS.—16. NAUTICAL SIGNALS.

427,480	Paine, A. T-----	May 6, 1890
---------	------------------	-------------

116. SIGNALS.—35. DOOR BELLS.

418,975	Emme, C. A-----	Jan. 7, 1890
---------	-----------------	--------------

121. STEAM ENGINES.—23. SPEED GOVERNORS.

407,006	Griscom, W. W-----	July 16, 1889
---------	--------------------	---------------

CLASSIFIED INDEX—ELECTRICITY.

122. STEAM BOILERS.—3. COVERINGS

No.	NAME.	DATE.	No.	NAME.	DATE.
427,928	Stellman, J. L -----				May 13, 1890

122. STEAM BOILERS.—11. INDICATORS.

409,189	Gilfillan, A. W -----	Aug. 20, 1889	420,649	Williams, J. M -----	Feb. 4, 1890
---------	-----------------------	---------------	---------	----------------------	--------------

123. AIR AND GAS ENGINES.—3. EXPLOSIVE.

408,356	Regan, D. S -----	Aug. 6, 1889	430,505	Barrett, M. M. and Daly, J. F--	June 17, 1890
430,310	Eisenhuth, J. W -----	June 17, 1890	430,506	Barrett, M. M. and Daly, J. F--	June 17, 1890
430,312	Eisenhuth, J. W -----	June 17, 1890	11,068	Regan, D. S -----	Apr. 1, 1890
430,504	Barrett, M. M. and Daly, J. F--	June 17, 1890			

125. STONE WORKING.—14. MINING MACHINES.

411,200	Lichner, F. M -----	Sept. 17, 1889	421,594	Michales, M. A -----	Feb. 18, 1890
---------	---------------------	----------------	---------	----------------------	---------------

126. STOVES AND FURNACES.—66. GAS STOVES.

411,448	Johnson, J. and Packer, E. H-----				Sept. 24, 1889
---------	-----------------------------------	--	--	--	----------------

128. SURGERY.—13. INHALERS AND RESPIRATORS.

422,802	Kennedy, J. C -----				Mar. 4, 1890
---------	---------------------	--	--	--	--------------

138. HYDRAULIC MOTORS.—8. ELEVATORS.

410,181	Ongley, C. E -----	Sept. 3, 1889	425,202	Blanchard, S. W -----	Apr. 8, 1890
---------	--------------------	---------------	---------	-----------------------	--------------

140. WIRE WORKING.—96. MACHINES FOR WINDING.

415,805	Belding, W. S -----				Nov. 26, 1889
---------	---------------------	--	--	--	---------------

159. FIRE ESCAPES AND LADDERS.—3. FLEXIBLE LADDERS.

413,270	Welch, O. T -----				Oct. 22, 1889
---------	-------------------	--	--	--	---------------

169. FIRE EXTINGUISHERS.—1. CHEMICAL.

406,341	Douse, T. R -----				July 2, 1889
---------	-------------------	--	--	--	--------------

169. FIRE EXTINGUISHERS.—3. STATIONARY.

416,779	Gleason, E. P -----				Dec. 10, 1889
---------	---------------------	--	--	--	---------------

181. ACOUSTICS.—3. MECHANICAL TELEPHONES.

413,782	Hall, A. W -----	Oct. 29, 1889	422,082	Ladd, H. W -----	Feb. 25, 1890
---------	------------------	---------------	---------	------------------	---------------

186. STORE SERVICE.—9. VENDING APPARATUS.

No.	NAME.	DATE.	No.	NAME.	DATE.
409,364	Molyneaux, B. S -----	Aug. 20, 1889	425,370	Coyle, A. M -----	Apr. 8, 1890
414,000	Amet, E. H -----	Oct. 29, 1889	428,750	Glass, L. and Arnold, W. S----	May 27, 1890
414,764	Euphrat, F -----	Nov. 12, 1889	428,751	Glass, L. and Arnold, W. S----	May 27, 1890
418,069	Rogers, H. G -----	Dec. 24, 1889	428,828	Cassard, H. L -----	May 27, 1890
418,070	Rogers, H. G. and Coyle, A. M-	Dec. 24, 1889	430,463	Busenbenz, J. J-----	June 17, 1890
418,071	Rogers, H. G -----	Dec. 24, 1889	11,049	Cowley, J. T-----	Dec. 24, 1889
422,326	Villiers-Stead, F. and Hedg- man, E. R.	Feb. 25, 1890			

125. STONE WORKING.—10. DRILLS.

408,269	Storey, I. E -----	Aug. 6, 1889	420,500	Storey, I. E -----	Feb. 4, 1890
---------	--------------------	--------------	---------	--------------------	--------------

187. ELEVATORS.—1. ELEVATORS.

417,086	Pratt, C. R -----	Dec. 10, 1889	417,087	Pratt, C. R -----	Dec. 10, 1889
---------	-------------------	---------------	---------	-------------------	---------------

187. ELEVATORS.—2. CONTROLLERS.

412,334	Gibson, W. P -----				Oct. 8, 1889
---------	--------------------	--	--	--	--------------

187. ELEVATORS.—6. INDICATORS.

429,189	Cushing, J. P -----				June 3, 1890
---------	---------------------	--	--	--	--------------

188. FLUID PRESSURE RAILWAY BRAKES—2. DERAILMENT.

414,295	Cox, C. A. and Cox, J. F -----				Nov. 5, 1889
---------	--------------------------------	--	--	--	--------------

APPENDIX No. IX.

PART II.

CONSISTING OF A

NUMERICAL AND CHRONOLOGICAL INDEX OF ALL PATENTS

RELATING TO

ELECTRICITY

Issued from July 1, 1889, to June 30, 1890, inclusive, giving names of Inventors,
numbers and dates of Patents, and the sub-class to which each belongs.

NUMERICAL INDEX

OF

PATENTS RELATING TO ELECTRICITY

FROM JULY 1, 1889, TO JUNE 30, 1890.

No.	NAME.	CLASS.	DATE.
406,041	Gill, J. C.	Conductors, insulators	July 2, 1889
406,057	O'Neil, J. C.	Railway signals	July 2, 1889
406,130	Edison, T. A.	Lights, incandescent	July 2, 1889
406,168	Hussey, C. A.	Batteries, galvanic	July 2, 1889
406,169	Hussey, C. A.	do	July 2, 1889
406,172	Lannert, J. A.	Recorders	July 2, 1889
406,223	Lee, J. E.	Batteries, galvanic	July 2, 1889
406,231	Nicolaus, E. B.	Air-pumps, mercury	July 2, 1889
406,267	Currie, S. C. C.	Batteries, secondary	July 2, 1889
406,268	Currie, S. C. C.	Cut-outs, thermal	July 2, 1889
406,284	Johns, H. W., jr.	Conductors	July 2, 1889
406,291	McLaughlin, J. F.	Type-writing	July 2, 1889
406,292	McLaughlin, J. F.	do	July 2, 1889
406,293	McLaughlin, J. F.	Bells	July 2, 1889
406,294	McLaughlin, J. F.	do	July 2, 1889
406,299	Overpeck, L. C.	Photography, combined apparatus	July 2, 1889
406,306	Pratt, H. P.	Medical and surgical, body-wear	July 2, 1889
406,331	Baker, W. H.	Connectors	July 2, 1889
406,337	Conkling, G.	Separators	July 2, 1889
406,341	Douse, T. R.	Fire extinguishers, chemical	July 2, 1889
406,354	Kookogey, W. P.	Batteries, secondary, applications	July 2, 1889
406,364	Mason, C. T.	Horology, watch balances	July 2, 1889
406,377	Vanderpool, A. A.	Annunciators	July 2, 1889
406,390	Dewey, M. W.	Telegraphy, printing	July 2, 1889
406,391	Dibble, H. D.	Locomotion	July 2, 1889
406,415	Andrews, W. S. and Spencer, T.	Magneto-electric	July 9, 1889
406,420	Blackwell, F. O.	Locomotion	July 9, 1889
406,421	Blackwell, F. O.	do	July 9, 1889
406,423	Bower, J. F.	Annunciators	July 9, 1889
406,429	Currie, S. C. C.	Magneto-electric	July 9, 1889
406,439	Griscom, W. W.	Batteries, secondary	July 9, 1889
406,468	Powers, J. A.	Cut-outs, mechanical	July 9, 1889
406,469	Powers, J. A.	Cut-outs, thermal	July 9, 1889
406,489	Waldo, H. A.	Telegraphy, keys	July 9, 1889
406,492	Wood, J. J.	Magneto-electric	July 9, 1889
406,493	Wood, J. J.	Regulators	July 9, 1889
406,494	Wood, J. J.	do	July 9, 1889
406,498	Backstrom, C. A.	Lights, incandescent	July 9, 1889
406,567	Edison, T. A.	Telephones, details	July 9, 1889
406,599	Silvey, W. L.	Magneto-electric	July 9, 1889
406,600	Sprague, F. J.	Locomotion	July 9, 1889
406,629	Coulter, G. A.	Telegraphy, fire, alarms and extinguishers	July 9, 1889
406,636	Dongans, M.	Batteries, galvanic	July 9, 1889
406,656	Lotz, F.	do	July 9, 1889
406,678	Walker, G. W.	Meters	July 9, 1889
406,681	Watts, J. H. C.	Lightning rods	July 9, 1889
406,709	Dawson, J. W.	Alarms, burglar	July 9, 1889
406,726	Grosmith, H.	Batteries, galvanic	July 9, 1889
406,743	Knight, W. H.	Locomotion	July 9, 1889
406,751	Martenot, F.	Valve-controllers	July 9, 1889
406,769	Reams, A. J.	Time-alarms	July 9, 1889
406,771	Riker, A. L.	Batteries, secondary	July 9, 1889
406,775	Sautter, C. F.	Thermostats	July 9, 1889
406,776	Schmid, A.	Magneto-electric	July 9, 1889
406,777	Schmid, A.	do	July 9, 1889
406,797	Van Depoele, C. J.	Locomotion	July 9, 1889
406,798	Van Depoele, C. J.	do	July 9, 1889
406,803	Weems, D. G.	do	July 9, 1889
406,804	Weems, D. G.	do	July 9, 1889
406,805	Weems, D. G.	do	July 9, 1889
406,806	Weems, D. G.	do	July 9, 1889
406,809	Wilson, J. C.	Recorders	July 9, 1889
406,818	Cook, G. W.	Conductors, underground	July 9, 1889

No.	NAME.	CLASS.	DATE.
406,822	Dey, H. E	Batteries, secondary	July 9, 1889
406,824	Edison, T. A	Meters	July 9, 1889
406,825	Edison, T. A	do	July 9, 1889
406,829	Fiske, B. A	Indicators	July 9, 1889
406,830	Fiske, B. A	do	July 9, 1889
406,833	Griscom, W. W	Locomotion	July 9, 1889
406,858	Schmid, A	Magneto-electric	July 9, 1889
406,859	Schmid, A	do	July 9, 1889
406,874	Buckley, J	Motors	July 16, 1889
406,890	Dewey, M. W	Heaters	July 16, 1889
406,897	Gaynor, T. F	Cut-outs, mechanical	July 16, 1889
406,906	Hill, W. S	do	July 16, 1889
406,916	Kitsee, I	Batteries, secondary	July 16, 1889
406,917	Knight, W. H	Locomotion	July 16, 1889
406,922	Mansfield, G. W	Motors	July 16, 1889
406,961	Schlesinger, W. M	Regulators	July 16, 1889
406,968	Tesla, N	Magneto-electric	July 16, 1889
406,969	Thompson, C. H	Batteries, secondary	July 16, 1889
406,975	Van Gestel, J. T	do	July 16, 1889
406,978	Wallace, T	Batteries, secondary, applications	July 16, 1889
406,981	Amory, A. and R	do	July 16, 1889
406,982	Anderson, F	Telegraphy, automatic	July 16, 1889
406,994	Chinnock, F. R	Insulators	July 16, 1889
406,997	Delany, P. B	Batteries, galvanic	July 16, 1889
407,004	Fisk, N. S	Telephones, supports	July 16, 1889
407,006	Griscom, W. W	Speed governors	July 16, 1889
407,014	Kelly, J. F. and Brangs, P. H	Regulators	July 16, 1889
407,077	Kimball, J. L. and Wirt, H. C	Lights, incandescent, special features	July 16, 1889
407,086	Main, W	Locomotion	July 16, 1889
407,093	Main, W	do	July 16, 1889
407,094	Main, W	do	July 16, 1889
407,095	Main, W	do	July 16, 1889
407,101	Milliken, G. F	Annunciators	July 16, 1889
407,115	Pratt, H. P	Medical and surgical, body-wear	July 16, 1889
407,116	Pratt, H. P	Electrodes	July 16, 1889
407,154	Bennett, E. H., jr	Magneto-electric	July 16, 1889
407,188	Field, S. D	Locomotion	July 16, 1889
407,204	Higham, D	Systems of distribution	July 16, 1889
407,210	Hunter, J. H	Lighting, systems	July 16, 1889
407,225	Loomis, O. P	Magneto-electric	July 16, 1889
407,272	Woolley, L. G	Motors	July 16, 1889
407,293	Higham, D	Regulators	July 16, 1889
407,294	Kennedy, R	Systems of distribution	July 16, 1889
11,012	Conkling, G	Separators	July 16, 1889
407,327	Buell, C. E	Magneto-electric, hand machines	July 23, 1889
407,386	Wiswell, J. C	Solution and precipitation	July 23, 1889
407,414	McKiune, W	Meters	July 23, 1889
407,416	Porter, M. D	Telegraphy, fire	July 23, 1889
407,447	Phipps, E. H	Conductors, underground	July 23, 1889
407,454	See, J. W	Telegraphy, lightning arresters	July 23, 1889
407,455	Smith, A. T	Cut-outs, electro-magnetic	July 23, 1889
407,460	Anderson, F	Telegraphy, automatic	July 23, 1889
407,461	Anderson, F	do	July 23, 1889
407,462	Anderson, F	do	July 23, 1889
407,470	Cutler, H. H	Locomotion	July 23, 1889
407,473	Dow, A	Medical and surgical, body-wear	July 23, 1889
407,477	Ezell, F	Applications, general	July 23, 1889
407,480	Healy, C. L	Telegraphy, relays and sounders	July 23, 1889
407,485	Lighthipe, J. A	Systems of distribution	July 23, 1889
407,487	Maxim, H. S	Operating ordnance	July 23, 1889
407,490	McIntosh, G	Indicators	July 23, 1889
407,496	Short, S. H	Locomotion	July 23, 1889
407,581	Dewey, M. W	Telegraphy, printing	July 23, 1889
407,593	Hollings, J. C	Chandeliers	July 23, 1889
407,618	Slattery, M. M. M	Induction coils	July 23, 1889
407,619	Slattery, M. M. M	Meters	July 23, 1889
407,660	Hill, C. F	Lightning rods	July 23, 1889
407,673	Mellon, J. S	Medical and surgical, body-wear	July 23, 1889
407,689	Riker, A. L	Locomotion	July 23, 1889
407,692	Robertson, J. H	Telegraphy, automatic	July 23, 1889
407,729	Healy, C. L	Telegraphy, printing	July 23, 1889
407,730	Healy, C. L	do	July 23, 1889
407,745	Short, S. H	Locomotion	July 23, 1889
407,746	Stevens, J. W	Closet cisterns	July 23, 1889
407,749	Van Depoele, C. J	Locomotion	July 23, 1889
407,761	Acheson, E. G	Magneto-electric	July 30, 1889
407,762	Acheson, E. G	do	July 30, 1889

No.	NAME.	CLASS.	DATE.
407,763	Acheson, E. G	Magneto-electric	July 30, 1889
407,781	Kookogey, W. P	Batteries, galvanic	July 30, 1889
407,799	Trowbridge, J. and Sheldon, S	Telephones, magnetic	July 30, 1889
407,801	Votey, E. S	Self-playing instruments	July 30, 1889
407,802	Votey, E. S	Organ-bellows	July 30, 1889
407,844	Thomson, E	Motors, alternating	July 30, 1889
407,875	Pfannkuche, G	Regulators	July 30, 1889
407,895	Kinsman, F. E	Lighting, systems	July 30, 1889
407,896	Marquard, F	Insulating materials	July 30, 1889
407,914	Wood, J. J	Lights, arc, special features	July 30, 1889
407,915	Wood, J. J	Lights, arc, gravity feed, gear-clutch	July 30, 1889
407,931	Hirlimann, C. J	Batteries, galvanic	July 30, 1889
407,938	Marquard, F	Insulating materials	July 30, 1889
407,945	Speer, A	Clocks, electric	July 30, 1889
407,950	Cooke, A. R	Dental instruments	July 30, 1889
407,973	Thompson, A. T	Drop-lights and hangers	July 30, 1889
408,002	Ernst, V. H	Batteries, secondary	July 30, 1889
408,016	Knowles, E. R	Meters	July 30, 1889
408,017	Knowles, E. R	do	July 30, 1889
408,018	Knowles, E. R	do	July 30, 1889
408,042	Palmer, D. A	Telegraphy, fire	July 30, 1889
408,045	Riker, A. L	Magneto-electric	July 30, 1889
408,112	Kookogey, W. P	Batteries, secondary	July 30, 1889
408,130	Ostermann, H. and Lacroix, C	Alloys	July 30, 1889
408,138	Schoop, P	Batteries, galvanic	July 30, 1889
408,151	Welcker, H	Medical and surgical, body-wear	July 30, 1889
408,157	Barrett, J. A	Galvanometers	July 30, 1889
408,182	Knowles, E. R	Alloys	July 30, 1889
408,194	Riggs, H. T	Cut-outs, mechanical	July 30, 1889
408,205	Boissier, H. R	Regulators	Aug. 6, 1889
408,206	Boissier, H. R	Magneto-electric	Aug. 6, 1889
408,224	Eddy, W	Telephones, calls	Aug. 6, 1889
408,231	Griscom, W. W	Locomotion	Aug. 6, 1889
408,232	Griscom, W. W	do	Aug. 6, 1889
408,233	Griscom, W. W	Street cars, steam	Aug. 6, 1889
408,265	Short, S. H.	Magneto-electric	Aug. 6, 1889
408,269	Storey, J. E	Drills	Aug. 6, 1889
408,279	Williams, J. B	Batteries, galvanic	Aug. 6, 1889
408,286	Bottomo, T. D	Lights, filaments and carbons	Aug. 6, 1889
408,287	Bottomo, T. D	Batteries, secondary	Aug. 6, 1889
408,295	De Ferranti, S. Z	Meters	Aug. 6, 1889
408,327	Smith, J. R	Telephone systems, automatic	Aug. 6, 1889
408,333	Whittingham, G. H	Regulators	Aug. 6, 1889
408,334	Adams, T. E	Locomotion	Aug. 6, 1889
408,356	Regan, D. S	Air and gas engines, explosive	Aug. 6, 1889
408,358	Schroeder, C. A. J. H	Lights, filaments and carbons	Aug. 6, 1889
408,367	Aldrich, N. B	Batteries, secondary	Aug. 6, 1889
408,374	Cobb, H. B	Conductors, lead-covered	Aug. 6, 1889
408,375	Cobb, H. B	do	Aug. 6, 1889
408,376	Cobb, H. B	do	Aug. 6, 1889
408,377	Cobb, H. B	do	Aug. 6, 1889
408,383	Graham, C. G	Insulators	Aug. 6, 1889
408,403	De Ferranti, S. Z	Magneto-electric	Aug. 6, 1889
408,404	De Ferranti, S. Z	do	Aug. 6, 1889
408,465	Dewey, M. W	Applications, general	Aug. 6, 1889
408,463	Dunlap, J. W., sr	Telephones, calls	Aug. 6, 1889
408,484	Huebner, L. and Busse, R	Magnetic locks and bolts	Aug. 6, 1889
408,503	Morley, J. H	Locomotion	Aug. 6, 1889
408,513	Perry, F. L	Systems of distribution	Aug. 6, 1889
408,544	Sprague, F. J	Locomotion	Aug. 6, 1889
408,574	Brooks, D., jr	Conductors, lead-covered	Aug. 6, 1889
408,590	Currie, S. C. C	Locomotion	Aug. 6, 1889
408,600	Erickson, E. E	Lights, incandescent, special features	Aug. 6, 1889
408,607	Flint, F. W	Electrodes	Aug. 6, 1889
408,629	Kookogey, W. P	Batteries, galvanic	Aug. 6, 1889
408,633	Van Depoele, C. J	Locomotion	Aug. 6, 1889
408,639	Van Depoele, C. J	do	Aug. 6, 1889
408,640	Van Depoele, C. J	do	Aug. 6, 1889
408,641	Van Depoele, C. J	Meters, alternating	Aug. 6, 1889
408,642	Van Depoele, C. J	do	Aug. 6, 1889
408,647	Blackwell, F. O	Rheostats	Aug. 6, 1889
408,666	McLaughlin, J. F	Batteries, secondary	Aug. 6, 1889
408,671	Riggs, J. W	Railway signals	Aug. 6, 1889
408,676	Smith, T. J	Bells	Aug. 6, 1889
408,678	Thompson, W	Cut-outs, mechanical	Aug. 6, 1889
11,919	Nevens, F. W	Apparel, cutting	Aug. 6, 1889
408,709	Gray, W	Telephones, systems	Aug. 13, 1889

No.	NAME.	CLASS.	DATE.
408,740	Opperman, A. F.	Lights, filaments and carbons	Aug. 13, 1889
408,753	Salisbury, W. S.	Locomotion	Aug. 13, 1889
408,754	Salisbury, W. S.	do	Aug. 13, 1889
408,762	Speicher, J.	Telegraphy, fire	Aug. 13, 1889
408,768	Van Gestel, J. T.	Magneto-electric	Aug. 13, 1889
408,778	Wellman, H. P.	Ferry guards	Aug. 13, 1889
408,785	Zoeller, T. J.	Igniting devices, automatic	Aug. 13, 1889
408,809	Meserole, A. V.	Batteries, secondary	Aug. 13, 1889
408,829	Cumnock, V. I.	Knitting and netting, stopping	Aug. 13, 1889
408,846	Pond, C. H.	Clocks, electric	Aug. 13, 1889
408,855	Schlesinger, W. M.	Locomotion	Aug. 13, 1889
408,875	Dewey, M. W.	Heaters	Aug. 13, 1889
408,879	Hedbavny, A.	Furs and pelts	Aug. 13, 1889
408,887	Lighthipe, J. A.	Lights, arc, gravity feed, gear-clutch	Aug. 13, 1889
408,901	Snedekor, C. T.	Conductors	Aug. 13, 1889
408,910	Card, G. F.	Motors	Aug. 13, 1889
408,948	Barker, W. H.	Lights, arc, gravity feed, clutch	Aug. 13, 1889
408,968	Gaynor, T. F.	Bells	Aug. 13, 1889
408,984	Love, J. C.	Locomotion	Aug. 13, 1889
408,986	Morris, H. G. and Salom, P. G.	Batteries, secondary	Aug. 13, 1889
408,992	Schmidt, J. M.	Alarms	Aug. 13, 1889
409,015	Coffin, C. L.	Heaters	Aug. 13, 1889
409,026	Eaton, W. S.	Engraving machines	Aug. 13, 1889
409,088	Williams, G. M.	Alarms	Aug. 13, 1889
409,097	Casey, F. M.	Applications, tools and machines	Aug. 13, 1889
409,104	Jennings, B.	Locomotion	Aug. 13, 1889
409,106	Kookogey, W. P.	Batteries, secondary	Aug. 13, 1889
409,116	Patton, W. H.	Locomotion	Aug. 13, 1889
409,135	Bentley, E. M.	Rheostats	Aug. 13, 1889
409,136	Cabell, S. G.	Incrustation	Aug. 13, 1889
409,146	Grassler, W. F.	Railway signals	Aug. 13, 1889
409,156	Van Depoele, C. J.	Locomotion	Aug. 13, 1889
409,157	Van Rysselberghe, F.	Telegraphy, reed	Aug. 13, 1889
409,170	Wheeler, M. C. and Clark, A. M.	Valve controllers	Aug. 20, 1889
409,178	Faure, C. A.	Batteries, secondary	Aug. 20, 1889
409,181	De Ferranti, S. Z.	Conductors	Aug. 20, 1889
409,182	De Ferranti, S. Z.	Systems of distribution	Aug. 20, 1889
409,183	De Ferranti, S. Z.	Connectors	Aug. 20, 1889
409,189	Gilfillan, A. W.	Indicators	Aug. 20, 1889
409,207	Knowles, E. R.	Galvanometers	Aug. 20, 1889
409,237	Ries, E. E.	Locomotion	Aug. 20, 1889
409,259	Ward, G. C.	Batteries, galvanic	Aug. 20, 1889
409,291	Kookogey, W. P.	do	Aug. 20, 1889
409,316	Butz, A. M.	Thermostats	Aug. 20, 1889
409,349	De Ferranti, S. Z.	Magneto-electric	Aug. 20, 1889
409,364	Molyneaux, B. S.	Vending apparatus	Aug. 20, 1889
409,365	Mond, L. and Langer, C.	Batteries, secondary	Aug. 20, 1889
409,366	Mond, L. and Langer, C.	do	Aug. 20, 1889
409,375	Simons, R. L.	Conductors, lead-covered	Aug. 20, 1889
409,390	Carson, R. D.	Lights, arc, positive feed, gear-clutch	Aug. 20, 1889
409,437	Vernette, F.	Dental instruments	Aug. 20, 1889
409,448	Bradley, C. S.	Batteries, secondary	Aug. 20, 1889
409,449	Bradley, C. S.	Transmission of power	Aug. 20, 1889
409,450	Bradley, C. S.	do	Aug. 20, 1889
409,460	Dunn, F. M., Petticord, A. and King, J. H.	Alarms	Aug. 20, 1889
409,463	Higham, D.	Magneto-electric	Aug. 20, 1889
409,470	Lawrauce, G. McG	Electrodes	Aug. 20, 1889
409,489	Mungesser, P. P.	Brick kilns	Aug. 20, 1889
409,490	Mungesser, P. P.	do	Aug. 20, 1889
409,498	Pierce, T. J.	Lights, incandescent, special features	Aug. 20, 1889
409,508	Schweuke, P.	Magnetic locks and bolts	Aug. 20, 1889
409,565	De Ferranti, S. Z.	Systems of distribution	Aug. 20, 1889
409,566	De Ferranti, S. Z.	do	Aug. 20, 1889
409,574	Gould, C. C.	Telephones, systems	Aug. 20, 1889
409,603	Dickson, J. G. and R. and Snyder, P.	Locomotion	Aug. 20, 1889
409,613	McLaughlin, J. F.	Type-writing	Aug. 20, 1889
409,628	Bishop, W. S.	Cut-outs, thermal	Aug. 20, 1889
409,646	McLellan, J. M.	Magneto-electric	Aug. 20, 1889
409,673	Everett, C.	Medical and surgical, body-wear	Aug. 27, 1889
409,675	Field, S. D.	Telegraphy, relays and sounders	Aug. 27, 1889
409,689	Lemp, H.	Telegraphy, lightning arresters	Aug. 27, 1889
409,714	Thomson, E.	Induction coils	Aug. 27, 1889
409,736	D'Unger, R.	Telephones, magnetic	Aug. 27, 1889
409,738	Elfering, J. H.	Applications, general	Aug. 27, 1889
409,752	McElroy, W. J.	Locomotion	Aug. 27, 1889
409,755	Richards, J. E.	Recorders	Aug. 27, 1889
409,756	Ries, E. E.	Locomotion	Aug. 27, 1889

No.	NAME.	CLASS.	DATE.
409,757	Ries, E. E	Locomotion	Aug. 27, 1889
409,775	De Ferranti, S. Z	do	Aug. 27, 1889
409,815	Allen, R. N	do	Aug. 27, 1889
409,852	Merrill, J. S	Drop-lights and hangers	Aug. 27, 1889
409,891	Wills, J	Recorders	Aug. 27, 1889
409,903	De Vars, H. A. B. H	Metalloids	Aug. 27, 1889
409,926	Clement, L. M. and Waters, G. C	Railways, traction, underground	Aug. 27, 1889
409,928	Coe, B. L	Lamp shades	Aug. 27, 1889
409,929	Collier, J. W	Lights, sockets and keys	Aug. 27, 1889
409,937	Devlin, T. C	Game counters	Aug. 27, 1889
409,963	Holmes, W. C	Medical and surgical, body-wear	Aug. 27, 1889
409,996	Meyer, M	Thermostats	Aug. 27, 1889
410,007	McLaughlin, J. F	Batteries, secondary	Aug. 27, 1889
410,013	Parcelle, A. L	Clocks, electric	Aug. 27, 1889
410,023	Richard, F	Speed measures	Aug. 27, 1889
410,037	Smith, F. H	Batteries, secondary	Aug. 27, 1889
410,049	Van Gestel, J. T	Locomotion	Aug. 27, 1889
410,053	Voss, R	Friction generators	Aug. 27, 1889
410,054	Waldron, C. F	Batteries, secondary	Aug. 27, 1889
410,059	Wolf, J. J	Telephone supports	Aug. 27, 1889
410,111	Kookogey, W. P	Batteries, secondary, applications	Aug. 27, 1889
410,136	Carter, C. H	Batteries, secondary	Aug. 27, 1889
410,150	Chase, H. A	Locomotion	Sept. 3, 1889
410,153	Currie, S. C. C	Batteries, secondary, applications	Sept. 3, 1889
410,168	Lemp, H	Lights, filaments and carbons	Sept. 3, 1889
410,170	Loomis, O. P	Regulators	Sept. 3, 1889
410,180	Ongley, C. E	Applications, tools and machines	Sept. 3, 1889
410,181	Ongley, C. E	Elevators	Sept. 3, 1889
410,182	Ongley, C. E	Applications, tools and machines	Sept. 3, 1889
410,183	Ongley, C. E	do	Sept. 3, 1889
410,184	Ongley, C. E	do	Sept. 3, 1889
410,185	Page, W. N	Endless belts	Sept. 3, 1889
410,189	Phalan, J. H	Bells	Sept. 3, 1889
410,212	Smith, R. C	Applications, tools and machines	Sept. 3, 1889
410,228	Wiswell, J. C	Solution, precipitation, and chlorination	Sept. 3, 1889
410,264	Blackwell, F. O	Locomotion	Sept. 3, 1889
410,265	Blackwell, F. O	Magneto-electric	Sept. 3, 1889
410,270	Donner, W. H	Grinding mills, grist alarms	Sept. 3, 1889
410,276	Haenichen, F. and O	Telegraphy, relays and sounders	Sept. 3, 1889
410,293	Rockwell, F. C	Lights, incandescent, special features	Sept. 3, 1889
410,305	Wheless, M	Telephones, electric	Sept. 3, 1889
410,318	Denio, W. L	Telegraphy, fire, alarms and extinguishers	Sept. 3, 1889
410,410	Goodwin, C. Q	Conductors, lead-covered	Sept. 3, 1889
410,468	Thomson, E. and Rice, E. W., jr	Induction coils	Sept. 3, 1889
410,493	Cohen, R. L	Lights, arc, gravity feed, clutch	Sept. 3, 1889
410,498	Daft, L	Locomotion	Sept. 3, 1889
410,502	Donner, W. H	Grinding mills, grist alarms	Sept. 3, 1889
410,545	Furlong, L. F	Cut-outs, thermal	Sept. 3, 1889
410,555	Milliken, J. A. and C. H. and D'Amour, E.	Printing, tickets	Sept. 3, 1889
410,556	Poote, T. M	Batteries, secondary, applications	Sept. 10, 1889
410,592	Johnson, J. R	Magneto-electric	Sept. 10, 1889
410,637	Davis, W. M	Insulators	Sept. 10, 1889
410,652	Scott, G. A	Medical and surgical, body-wear	Sept. 10, 1889
410,656	Statter, J. G	Magneto-electric	Sept. 10, 1889
410,663	Bradford, J. M	Regulators	Sept. 10, 1889
410,670	Jenney, C. D	Magneto-electric	Sept. 10, 1889
410,680	Van Gestel, J. T	Batteries, secondary	Sept. 10, 1889
410,683	Carhart, E. M	Alarms, burglar	Sept. 10, 1889
410,689	Hollings, J. C	Lights, incandescent, special features	Sept. 10, 1889
410,786	Cooper, A. G. and Wigzell, E. E	Recorders	Sept. 10, 1889
410,860	Slattery, M. M. M	Meters	Sept. 10, 1889
410,871	Bemis, S. A. and Pfingst, L	Railway cars, trucks	Sept. 10, 1889
410,876	Conkling, G	Separators	Sept. 10, 1889
410,877	Conkling, G	do	Sept. 10, 1889
410,886	Gill, O. A	Sack scales	Sept. 10, 1889
410,896	Hoffmann, R	Regulators	Sept. 10, 1889
410,953	Brooks, D., jr	Conductors	Sept. 10, 1889
410,964	Fitch, A. S	Magneto-electric, hand machines	Sept. 10, 1889
410,965	Fitch, A. S	Magneto-electric	Sept. 10, 1889
410,966	Fitch, A. S	do	Sept. 10, 1889
410,976	Kerner, G. and Marx, J	Solution and precipitation, electrolysis	Sept. 10, 1889
410,987	Patten, F. J	Motors, alternating	Sept. 10, 1889
410,988	Patten, F. J	do	Sept. 10, 1889
411,016	Edison, T. A	Lights, filaments and carbons	Sept. 17, 1889
411,017	Edison, T. A	do	Sept. 17, 1889
411,018	Edison, T. A	do	Sept. 17, 1889
411,019	Edison, T. A	Lights, incandescent	Sept. 17, 1889

No.	NAME.	CLASS.	DATE.
411,020	Edison, T. A	Lights, filaments and carbons	Sept. 17, 1889
411,030	Hirlimann, C. J	Motors	Sept. 17, 1889
411,041	King, A. S. and Swaney, W. H	Regulators, gas	Sept. 17, 1889
411,042	Kolle, H. W	Meters	Sept. 17, 1889
411,088	Boardman, F. R	Lights, arc and incandescent	Sept. 17, 1889
411,093	Coughlin, W. H	Connectors	Sept. 17, 1889
411,120	Cole, W. R	Bells	Sept. 17, 1889
411,124	Huestis, F. W	Batteries, secondary	Sept. 17, 1889
411,133	Scribner, C. E	Annunciators	Sept. 17, 1889
411,137	Campbell, H. F	Conductors, anti-inductive	Sept. 17, 1889
411,138	Carter, C. H	Clocks, electric	Sept. 17, 1889
411,150	Kissell, A. S	Valve-controllers	Sept. 17, 1889
411,153	Lafferty, S. C	Connectors	Sept. 17, 1889
411,168	Pond, C. H	Clocks, electric	Sept. 17, 1889
411,198	Johnson, A. E	Transmitters	Sept. 17, 1889
411,200	Lichner, F. M	Mining machines	Sept. 17, 1889
411,230	Streeper, D. H	Alarms	Sept. 17, 1889
411,238	Danals, C. A	Cut-outs, electro-magnetic	Sept. 17, 1889
411,287	Kinsman, F. E	Lights, arc, gravity feed, gear-clutch	Sept. 17, 1889
411,301	Ries, E. E	Batteries, secondary, applications	Sept. 17, 1889
411,311	Ware, E. R	Thermostats	Sept. 17, 1889
411,313	Wightman, M. J	Locomotion	Sept. 17, 1889
411,314	Wightman, M. J	do	Sept. 17, 1889
411,370	Barrett, S. H	Batteries, secondary	Sept. 17, 1889
411,380	Heller, F. G. A	Cut-outs, thermal	Sept. 17, 1889
411,400	Thompson, W. C	Batteries, galvanic	Sept. 17, 1889
411,407	Wilson, J. C	Telegraphy, fire	Sept. 17, 1889
411,414	Anthony, W. A	Separators	Sept. 24, 1889
411,423	Bussman, O. S	Cut-outs, thermal	Sept. 24, 1889
411,426	Dahl, O.	Batteries, secondary	Sept. 24, 1889
411,427	Dashiell, C. C	Conductors, underground	Sept. 24, 1889
411,443	Hyman, D	Street lamps	Sept. 24, 1889
411,448	Johnson, J. and Packer, E. H	Gas stoves	Sept. 24, 1889
411,452	Klein, P. H., jr	Cut-outs, thermal	Sept. 24, 1889
411,474	Sellon, J. S	Lights, filaments and carbons	Sept. 24, 1889
411,496	Fraley, G. B	Locomotion	Sept. 24, 1889
411,539	Wheeler, G. A	Conductors, underground	Sept. 24, 1889
411,551	Harris, L. S	Regulators	Sept. 24, 1889
411,588	Dickson, C. T	Telephones, supports	Sept. 24, 1889
411,595	Hyland, D. M	Conductors, underground	Sept. 24, 1889
411,611	Read, R. H	Motors, synchronizing	Sept. 24, 1889
411,612	Read, R. H	Telegraphy, multiplex	Sept. 24, 1889
411,613	Riker, A. L	Locomotion	Sept. 24, 1889
411,629	Winkler, C. F	Magneto-electric	Sept. 24, 1889
411,689	Smith, C. C. and Martin, H. W	Medical and surgical, body-wear	Sept. 24, 1889
411,713	Cox, F. P	Lights, arc, positive feed, gear-clutch	Sept. 24, 1889
411,737	Smith, D. W	Heaters	Sept. 24, 1889
411,742	Fisk, A. B	Railway signals	Sept. 24, 1889
411,749	McCarthy, L	Insulators	Sept. 24, 1889
411,770	Tebbs, H. S., Lane, N. C. and Coombs, V	Telegraphy, keys	Sept. 24, 1889
11,031	Kennedy, R	Systems of distribution	Sept. 24, 1889
411,772	Armstrong, C. G	Annunciators	Oct. 1, 1889
411,782	Card, G. F	Regulators	Oct. 1, 1889
411,783	Card, G. F	do	Oct. 1, 1889
411,786	Currie, S. C. C	Batteries, secondary	Oct. 1, 1889
411,787	Currie, S. C. C	do	Oct. 1, 1889
411,801	Fletcher, J. R	Insulators	Oct. 1, 1889
411,805	Gaynor, T. F	Iron structures	Oct. 1, 1889
411,831	Nordenfelt, T	Ordinance, electric appliances	Oct. 1, 1889
411,833	Peck, C. C	Motors	Oct. 1, 1889
411,840	Taylor, R. S. and Slattery, M. M. M	Motors, alternating	Oct. 1, 1889
411,899	Moffatt, R. R	Separators	Oct. 1, 1889
411,900	McCahey, J	Covering cord	Oct. 1, 1889
411,908	Stevens, F.	Valve-controllers	Oct. 1, 1889
411,930	Ricc, E. W., jr., and Rohrer, A. L	Magneto-electric	Oct. 1, 1889
411,935	Scymour, A. P	Cut-outs, mechanical	Oct. 1, 1889
411,936	Seymour, A. P	Lights, arc, special features	Oct. 1, 1889
411,947	Wightman, M. J	Rheostats	Oct. 1, 1889
411,950	Atwater, A. S	Magneto-electric	Oct. 1, 1889
411,970	Shallenberger, O. B	Lighting, systems	Oct. 1, 1889
411,982	Diehl, P	Motors	Oct. 1, 1889
411,983	Diehl, P	do	Oct. 1, 1889
411,989	Jackson, C. A	Locomotion	Oct. 1, 1889
412,013	Beebe, E. W	Thermostats	Oct. 1, 1889
412,045	Scribner, J. F	Telegraphy, fire	Oct. 1, 1889
412,089	Hawkes, T. G	Reflectors	Oct. 1, 1889
412,095	Johnson, I. La R	Conductors, underground	Oct. 1, 1889

No.	NAME.	CLASS.	DATE.
412,115	Nix, J. L	Thermostats	Oct. 1, 1889
412,140	Thomson, W	Galvanometers	Oct. 1, 1889
412,141	Von Hefner-Altenneck, F. and Hoffman, C.	Lights, arc, gravity feed, gear-clutch	Oct. 1, 1889
412,155	Anderson, A	Locomotion	Oct. 1, 1889
412,157	Andersen, A	do	Oct. 1, 1889
412,159	Bennett, F. M	Cut-outs, mechanical	Oct. 1, 1889
412,165	Cox, H. B	Electrodes	Oct. 1, 1889
412,177	Groszwith, H	Motors	Oct. 1, 1889
412,185	Hopkinson, J. and E	Regulators, alternating	Oct. 1, 1889
412,186	Hopkinson, J. and E	do	Oct. 1, 1889
412,196	Mellon, J. S	Medical and surgical, body-wear	Oct. 1, 1889
412,234	Blake, R	Telephones, details	Oct. 8, 1889
412,323	Currie, S. C. C	Batteries, secondary	Oct. 8, 1889
412,332	Gibson, W. P	Applications, tools and machines	Oct. 8, 1889
412,333	Gibson, W. P	do	Oct. 8, 1889
412,334	Gibson, W. P	Controllers	Oct. 8, 1889
412,345	Smith, W. F	Batteries, secondary	Oct. 8, 1889
412,346	Smith, W. F	do	Oct. 8, 1889
412,347	Smith, W. F	Connectors	Oct. 8, 1889
412,349	Winkler, C. F	Magneto-electric	Oct. 8, 1889
412,350	Winkler, C. F	do	Oct. 8, 1889
412,351	Winkler, C. F	do	Oct. 8, 1889
412,352	Winkler, C. F	do	Oct. 8, 1889
412,353	Winkler, C. F	do	Oct. 8, 1889
412,354	Wood, J. J	Galvanometers	Oct. 8, 1889
412,361	Bergmann, S	Lights, sockets and keys	Oct. 8, 1889
412,449	Askew, C. B	Rheostats	Oct. 8, 1889
412,460	Burton, G. D	Telegraphy, circuit-closers	Oct. 8, 1889
412,462	Carley, C. R	Photography, burnishing presses	Oct. 8, 1889
412,464	Carranza, M. and Tinoco, J. M	Igniting devices, manual	Oct. 8, 1889
412,476	Cushing, J. P	Locomotion	Oct. 8, 1889
412,528	McDougall, W. M	do	Oct. 8, 1889
412,529	Neu, G. S	Valve-controllers	Oct. 8, 1889
412,530	Neu, G. S	Railway signals	Oct. 8, 1889
412,563	Streepier, D. H	Alarms, burglar	Oct. 8, 1889
412,567	Tracy, P. J	Regulators	Oct. 8, 1889
412,579	Abdank-Abakanowicz, A	Telephones, electric	Oct. 8, 1889
412,580	Abdank-Abakanowicz, A	do	Oct. 8, 1889
412,599	Coffin, C. L	Heaters	Oct. 8, 1889
412,605	Daft, L	Locomotion	Oct. 8, 1889
412,606	Dow, L	Printing, setting and distributing	Oct. 8, 1889
412,639	Lyte, F. M	Batteries, secondary	Oct. 8, 1889
412,657	Pain, R. W	Self-playing instruments	Oct. 8, 1889
412,666	Reno, J. W	Locomotion	Oct. 8, 1889
412,669	Roberts, W. S. de L. and Mollison, J. S	Batteries, thermal	Oct. 8, 1889
412,700	Elkins, W. H	Regulators	Oct. 8, 1889
412,713	Sayers, W. B. and Sturge, U. H	Drop-lights and hangers	Oct. 8, 1889
412,727	Carpenter, H. H	Batteries, secondary	Oct. 15, 1889
412,758	Johnston, W. C., jr	Telegraphy, circuit-closers	Oct. 15, 1889
412,818	Wood, J. J	Telephones, switch-boards	Oct. 15, 1889
412,845	Ely, G. E	Telegraphy, circuit-closers	Oct. 15, 1889
412,854	Kingdon, J. A	Magneto-electric	Oct. 15, 1889
412,885	Heydler, E. F	Telephones, electric	Oct. 15, 1889
412,889	McIntire, C	Connectors	Oct. 15, 1889
412,924	Kester, J. F	Applications, general	Oct. 15, 1889
412,925	Kinsman, F. E	Transmission of power	Oct. 15, 1889
412,928	Macrae, R	Regulators	Oct. 15, 1889
412,932	Shallenberger, O. B	Transmission of power	Oct. 15, 1889
412,933	Shallenberger, O. B	Magneto-electric	Oct. 15, 1889
412,962	Loomis, O. P	Lights, sockets and keys	Oct. 15, 1889
412,971	Milliken, G. F	Telegraphy, fire	Oct. 15, 1889
413,008	Zipernowsky, C	Magneto-electric	Oct. 15, 1889
413,011	Asmus, G. C	Lights, arc, special features	Oct. 15, 1889
413,038	Douglas, W. H	Meters	Oct. 15, 1889
413,058	Hirsch, L	Applications, general	Oct. 15, 1889
413,083	McLaughlin, J. F	Telephones, switch-boards	Oct. 15, 1889
413,085	Patten, F. J	Motors, alternating	Oct. 15, 1889
413,112	Tudor, H	Batteries, secondary	Oct. 15, 1889
413,133	Denison, S. P	Conductors, underground	Oct. 15, 1889
413,134	Denison, S. P	do	Oct. 15, 1889
413,136	Dewey, M. W	Heaters	Oct. 15, 1889
413,146	McCarthy, L	Insulators	Oct. 15, 1889
413,148	Pannkuche, G	Magneto-electric	Oct. 15, 1889
413,151	Sprague, F. J	Locomotion	Oct. 15, 1889
413,160	Barrett, S. H	Lighting, systems	Oct. 22, 1889
413,207	Pforzheimer, J	Registers	Oct. 22, 1889
413,215	Warde, G. H	Conductors, underground	Oct. 22, 1889

No.	NAME.	CLASS.	DATE.
413,220	Brady, T. H.	Lights, arc, special features	Oct. 22, 1889
413,250	Farciot, C. O.	Compasses	Oct. 22, 1889
413,261	Mozier, A. M.	Railways, interlocking	Oct. 22, 1889
413,270	Welch, O. T.	Fire-escapes, flexible ladders	Oct. 22, 1889
413,276	Farnham, I. H.	Telephones, systems	Oct. 22, 1889
413,279	Hochhausen, W.	Regulators	Oct. 22, 1889
413,280	Hochhausen, W.	do	Oct. 22, 1889
413,281	Hussey, M. L. M.	Clocks, electric	Oct. 22, 1889
413,287	Mitchell, J.	Locomotion	Oct. 22, 1889
413,292	Thomson, E.	Galvanometers	Oct. 22, 1889
413,293	Thomson, E. and Rice, E. W., jr.	Systems of distribution	Oct. 22, 1889
413,294	Thomson, E.	Locomotion	Oct. 22, 1889
413,308	Selden, C.	Telephones, magnetic	Oct. 22, 1889
413,309	Shapleigh, W.	Metal founding, soft metals	Oct. 22, 1889
413,331	Snelgrove, W.	Scale beams	Oct. 22, 1889
413,337	Eickemeyer, R.	Magneto-electric	Oct. 22, 1889
413,338	Eickemeyer, R.	Galvanometers	Oct. 22, 1889
413,339	Eickemeyer, R.	Batteries, secondary	Oct. 22, 1889
413,340	Gerry, J. H.	Clocks, electric	Oct. 22, 1889
413,345	Kookogey, W. P.	Batteries, galvanic	Oct. 22, 1889
413,353	Tesla, N.	Systems of distribution	Oct. 22, 1889
413,363	Eickemeyer, R.	Magneto-electric	Oct. 22, 1889
413,409	McElroy, D. S.	Railway signals	Oct. 22, 1889
413,410	McElroy, D. S.	do	Oct. 22, 1889
413,411	McElroy, D. S.	Electro-magnets	Oct. 22, 1889
413,412	McElroy, D. S.	Railway signals	Oct. 22, 1889
413,429	Baker, E. B.	Telegraphy, lightning arresters	Oct. 22, 1889
413,436	Decrow, W. E.	Telegraphy, fire	Oct. 22, 1889
413,438	Eggers, F. F.	Alloys	Oct. 22, 1889
413,442	Gennert, E. F.	Lights, incandescent, special features	Oct. 22, 1889
413,504	Fisher, F. E.	Annunciators	Oct. 22, 1889
413,512	Hull, R. C.	Motors	Oct. 22, 1889
413,568	Shaffer, C. H.	Thermostats	Oct. 22, 1889
413,604	Hunter, R. M.	Locomotion	Oct. 22, 1889
413,629	Phillips, W. A.	Covering cord	Oct. 22, 1889
413,636	Van Gestel, J. T.	Lights, incandescent	Oct. 22, 1889
413,637	Wheless, M.	Locomotion	Oct. 22, 1889
413,703	Wurts, A.	Cut-outs, thermal	Oct. 29, 1889
413,707	Campbell, H. F.	Conductors, anti-inductive	Oct. 29, 1889
413,708	Coad, T.	Lights, incandescent, special features	Oct. 29, 1889
413,731	Poole, C. P.	Locomotion	Oct. 29, 1889
413,735	Schaefer, L.	Cut-outs, thermal	Oct. 29, 1889
413,782	Hall, A. W.	Telephones, mechanical	Oct. 29, 1889
413,795	Stockwell, J. O. and Barrett, A.	Anti-induction devices	Oct. 29, 1889
413,810	Paget, L.	Systems of distribution	Oct. 29, 1889
413,812	Ritchie, A. M.	Galvanometers	Oct. 29, 1889
413,813	Root, H. C.	Cut-outs, thermal	Oct. 29, 1889
413,818	Adams, T. E.	Locomotion	Oct. 29, 1889
413,848	Crull, E. S.	Telegraphy, keys	Oct. 29, 1889
413,879	Winder, W.	Connectors	Oct. 29, 1889
413,890	Bemis, S. A.	Railway cars, trucks	Oct. 29, 1889
413,960	Pfingst, L.	Railway cars, brakes	Oct. 29, 1889
413,984	Thone, F.	Regulators	Oct. 29, 1889
413,986	Van Depoele, C. J.	Motors, alternating	Oct. 29, 1889
414,000	Amet, E. H.	Vending apparatus	Oct. 29, 1889
414,025	Cumnock, V. I.	Spinning, stopping	Oct. 29, 1889
414,043	Gutmann, L.	Regulators	Oct. 29, 1889
414,049	Hunter, R. M.	Locomotion	Oct. 29, 1889
414,050	Hunter, R. M.	do	Oct. 29, 1889
414,052	Immich, M.	Regulators	Oct. 29, 1889
414,076	Pfannkuche, G.	Galvanometers	Oct. 29, 1889
414,081	Roberts, I. L.	Batteries, galvanic	Oct. 29, 1889
414,085	Schneider, F. W. A.	Telephones, calls	Oct. 29, 1889
414,130	Seifert, W. F. R.	Lights, arc, gravity feed, clutch	Oct. 29, 1889
414,132	Adams, S. J.	Telephones, supports	Oct. 29, 1889
414,141	Chapman, F. G. and Dearing, F. M.	Lights, arc, positive feed	Oct. 29, 1889
414,155	Head, C. B.	Telegraphy, fire, alarms and extinguishers	Oct. 29, 1889
414,172	Sprague, F. J. and O'Shaughnessy, P. F.	Locomotion	Oct. 29, 1889
414,191	Conant, H. J.	Regulators	Nov. 5, 1889
414,220	Hussey, C. A.	Batteries, galvanic	Nov. 5, 1889
414,245	Pfannkuche, G.	Magneto-electric	Nov. 5, 1889
414,266	Thomson, E.	Induction coils	Nov. 5, 1889
414,267	Thompson, H. E.	Thermostats	Nov. 5, 1889
414,288	Carpenter, H. H.	Metal working, miscellaneous	Nov. 5, 1889
414,289	Christy, W.	Locomotion	Nov. 5, 1889
414,295	Cox, C. A. and Cox, J. F.	Railway brakes, derailment	Nov. 5, 1889
414,308	Goucher, A. A.	Alarms, burglar	Nov. 5, 1889

No.	NAME.	CLASS.	DATE.
414,310	Haskins, C. D. and Scribner, C. E.	Telephones, systems	Nov. 5, 1889
414,317	Hussey, C. A.	Batteries, galvanic	Nov. 5, 1889
414,318	Hussey, C. A.	do	Nov. 5, 1889
414,327	Richards, J. W. and Hall, J. B.	Conductors, underground	Nov. 5, 1889
414,339	Spaulding, H. C.	Meters	Nov. 5, 1889
414,343	Thackeray, W. T. W. and Huru, I.	Annunciators	Nov. 5, 1889
414,356	Wirt, C.	Telegraphy, lightning arresters	Nov. 5, 1889
414,362	Anderson, A.	Connectors	Nov. 5, 1889
414,399	Goodson, G. A.	Printing, matrix-making	Nov. 5, 1889
414,400	Goodson, G. A.	do	Nov. 5, 1889
414,418	Leonard, H. W.	Car-brakes	Nov. 5, 1889
414,422	Lockwood, J. E.	Galvanometers	Nov. 5, 1889
414,438	Osburn, H. G.	Batteries, secondary	Nov. 5, 1889
414,492	Carr, C. P.	Telegraphy, quadruplex	Nov. 5, 1889
414,541	Hopkinson, J.	Systems of distribution	Nov. 5, 1889
414,583	Reams, J. M.	Locomotion	Nov. 5, 1889
414,595	Shallenberger, O. B.	Meters	Nov. 5, 1889
414,609	Van Depoele, C. J.	Locomotion	Nov. 5, 1889
414,612	Cox-Walker, E. and Swinton, A. A. C.	Bells	Nov. 5, 1889
414,624	Young, C. I.	Telegraphy, lightning arresters	Nov. 5, 1889
414,626	Barrett, J. A.	Induction coils	Nov. 5, 1889
414,627	Barrett, J. A.	Batteries, galvanic	Nov. 5, 1889
414,637	Goodson, G. A.	Applications, tools and machines	Nov. 5, 1889
414,645	Kookogey, W. P.	Railway signals	Nov. 5, 1889
414,659	Seafert, W.	Magneto-electric	Nov. 5, 1889
414,668	Laughton, W.	Medical and surgical, body-wear	Nov. 5, 1889
414,681	Culver, F. E.	Railways, traction, underground	Nov. 12, 1889
414,686	Dunn, P. J.	Bridges, girders and columns	Nov. 12, 1889
414,695	Gaynor, T. F.	Applications, tools and machines	Nov. 12, 1889
414,714	Leonard, M. B.	Heaters	Nov. 12, 1889
414,741	Wilson, G. W.	Lights, incandescent	Nov. 12, 1889
414,742	Wilson, G. W.	do	Nov. 12, 1889
414,757	Diehl, P.	Motors	Nov. 12, 1889
414,758	Diehl, P.	do	Nov. 12, 1889
414,763	Estabrook, W. W.	Igniting devices, automatic	Nov. 12, 1889
414,764	Euphrat, F.	Vending apparatus	Nov. 12, 1889
414,773	Kookogey, W. P.	Railway signals	Nov. 12, 1889
414,792	Bottome, T. D.	Cut-outs, thermal	Nov. 12, 1889
414,798	Dawes, A.	Drop-lights and hangers	Nov. 12, 1889
414,860	Dunlap, W. A.	Electro-deposition	Nov. 12, 1889
414,866	Mehren, J. F.	Galvanometers	Nov. 12, 1889
414,868	Morgan, F. E.	Telegraphy, fire	Nov. 12, 1889
414,879	Edgecomb, D. W. and Terry, C. A.	Annunciators	Nov. 12, 1889
414,883	Harrison, E. L.	Alarms	Nov. 12, 1889
414,900	Geisenhöner, H.	Magneto-electric	Nov. 12, 1889
414,922	Rodman, S., jr.	Lights, sockets and keys	Nov. 12, 1889
414,933	Adams, F. U.	Street lamps	Nov. 12, 1889
414,943	Dewey, M. W.	Batteries, secondary, applications	Nov. 12, 1889
414,953	Roberts, W.	Batteries, secondary	Nov. 12, 1889
414,961	Wilson, H. M.	Telephones, supports	Nov. 12, 1889
414,966	Battershall, J. W.	Cut-outs, mechanical	Nov. 12, 1889
414,970	Camp, H. B.	Conductors, underground	Nov. 12, 1889
414,996	Ries, E. E.	Car-brakes	Nov. 12, 1889
415,007	Thompson, D. W.	Thermostats	Nov. 12, 1889
415,024	Coffin, C. C.	Electro-deposition	Nov. 12, 1889
415,070	Short, S. H.	Locomotion	Nov. 12, 1889
415,110	Johnson, I. La R.	Conductors, underground	Nov. 12, 1889
415,165	Finney, J. R.	Locomotion	Nov. 12, 1889
415,168	Hambury, J. T.	Railways, interlocking	Nov. 12, 1889
415,182	Hess, A. T.	Annunciators	Nov. 12, 1889
415,190	Daniels, T. E., jr.	Magneto-electric	Nov. 19, 1889
415,252	McDonald, R. T. and Cain, J.	Locomotive head lights	Nov. 19, 1889
415,262	Wetmore, J. A.	Conductors, lead-covered	Nov. 19, 1889
415,274	Kane, H. H.	Medical and surgical, body-wear	Nov. 19, 1889
415,305	Thomson, E. and Tregoning, J.	Soldering clamps	Nov. 19, 1889
415,324	Green, L. R.	Bridges, girders and columns	Nov. 19, 1889
415,325	Green, L. R.	do	Nov. 19, 1889
415,327	Kennedy, P. and Diss, C. J.	Batteries, secondary	Nov. 19, 1889
415,329	Payen, C.	do	Nov. 19, 1889
415,330	Payen, C.	Lead	Nov. 19, 1889
415,331	Payen, C.	Batteries, secondary	Nov. 19, 1889
415,332	Payen, C.	Metal founding in metal molds	Nov. 19, 1889
415,333	Payen, C.	Batteries, secondary	Nov. 19, 1889
415,335	Reese, J.	Lights, incandescent	Nov. 19, 1889
415,338	Backus, E.	Car-brakes	Nov. 19, 1889
415,345	Moreton, F.	Batteries, galvanic	Nov. 19, 1889
415,347	Payen, C.	Lead	Nov. 19, 1889

No.	NAME.	CLASS.	DATE.
415,348	Paven, C	Lead	Nov. 19, 1889
415,349	Paven, C	do	Nov. 19, 1889
415,350	Pullman, H. B.	Motors	Nov. 19, 1889
415,363	Loomis, F. F.	Magneto-electric	Nov. 19, 1889
415,417	McIlhenny, R. J.	Telegraphy, repeaters	Nov. 19, 1889
415,487	Whittingham, G. H.	Regulators	Nov. 19, 1889
415,490	Allen, W. H.	Batteries, secondary	Nov. 19, 1889
415,491	Bates, P. S.	Meters	Nov. 19, 1889
415,504	Fowler, G.	Insulators	Nov. 19, 1889
415,571	Scribner, C. E.	Lights, arc, gravity feed, clutch	Nov. 19, 1889
415,572	Scribner, C. E.	do	Nov. 19, 1889
415,573	Scribner, C. E.	Telephones, systems	Nov. 19, 1889
415,574	Scribner, C. E.	Telegraphy, fire	Nov. 19, 1889
415,576	Siemens, W.	Solution and precipitation, electrolysis	Nov. 19, 1889
415,577	Siemens, E. W.	Meters	Nov. 19, 1889
415,578	Skelton, F. A.	Telegraphy, repeaters	Nov. 19, 1889
415,593	Watson, J. E.	Batteries, galvanic	Nov. 19, 1889
415,600	Wotton, J. A. and Polk, W. R., jr.	Batteries, secondary	Nov. 19, 1889
415,617	Cody, J. L.	Passenger cars	Nov. 19, 1889
415,628	Farmer, J. R.	Lamp shades	Nov. 19, 1889
415,629	Foote, G. L.	Telegraphy, fire	Nov. 19, 1889
415,641	Jaeger, C. L.	Regulators	Nov. 19, 1889
415,644	Kerner, G. and Marx, J.	Electrolysis	Nov. 19, 1889
415,683	Payen, C.	Lead	Nov. 19, 1889
415,695	Belding, W. S.	Magneto-electric	Nov. 26, 1889
415,696	Belding, W. S.	do	Nov. 26, 1889
415,697	Belding, W. S.	do	Nov. 26, 1889
415,700	Bonta, J. W.	Telephones, magnetic	Nov. 26, 1889
415,710	Fowler, F. E.	Locomotion	Nov. 26, 1889
415,738	Seegall, H. R.	Electrolysis	Nov. 26, 1889
415,747	Thomson, E.	Meters	Nov. 26, 1889
415,748	Thomson, E.	do	Nov. 26, 1889
415,749	Thomson, E.	Inductariums, transformers, stationary	Nov. 26, 1889
415,751	Wesslan, B. H. and Trautwein, G.	Conductors, underground	Nov. 26, 1889
415,752	Wesslan, B. H.	do	Nov. 26, 1889
415,758	Wiesebrook, F. W. and Huber, E.	Telethermometers	Nov. 26, 1889
415,765	Carty, J. J.	Telephones, systems	Nov. 26, 1889
415,766	Currie, S. C. C.	Batteries, secondary, applications	Nov. 26, 1889
415,805	Belding, W. S.	Machines for winding	Nov. 26, 1889
415,806	Belding, W. S.	Magneto-electric	Nov. 26, 1889
415,817	Lane, F. A.	Clocks, electric	Nov. 26, 1889
415,856	Carpenter, C. E.	Heaters	Nov. 26, 1889
415,864	Gilson, S. H.	Insulating materials	Nov. 26, 1889
415,871	Kissell, M. A. and A. S.	Valve-controllers	Nov. 26, 1889
415,877	Mont-Ross, J. A.	Paper manufactures, feeding	Nov. 26, 1889
415,896	Bradner, W. F.	Drop-lights and hangers	Nov. 26, 1889
415,897	Bradner, W. F.	do	Nov. 26, 1889
415,915	Lee, C. E.	Annunciators	Nov. 26, 1889
415,936	Bradbury, J. Y. and Stone, F. J.	Batteries, secondary	Nov. 26, 1889
415,962	Enholm, O. A.	Miscellaneous compositions	Nov. 26, 1889
415,963	Enholm, O. A.	Batteries, galvanic	Nov. 26, 1889
415,975	Otto, G.	do	Nov. 26, 1889
415,981	Smith, W. F.	Batteries, secondary	Nov. 26, 1889
415,990	Zigang, J. P.	Bells	Nov. 26, 1889
416,006	Moennich, P.	Indicators	Nov. 26, 1889
416,013	Riker, A. L.	Magneto-electric	Nov. 26, 1889
416,051	Chassagne, P. J.	Lights, sockets and keys	Nov. 26, 1889
416,090	Best, A. W. and Underwood, H. G.	Gearing	Nov. 26, 1889
416,092	Clawson, C. C.	Kaleidoscopes	Nov. 26, 1889
416,103	Harter, G. A.	Magnetic locks and bolts	Nov. 26, 1889
416,122	Park, W. R.	Insulators	Nov. 26, 1889
416,126	Smith, W. F.	Batteries, secondary	Nov. 26, 1889
416,131	Weeden, H. C.	Urinals	Nov. 26, 1889
416,138	Weeden, H. C.	do	Nov. 26, 1889
416,143	Wesslau, B. H.	Conductors, underground	Nov. 26, 1889
416,144	Wesslau, B. H.	do	Nov. 26, 1889
416,148	Slocum, E. L.	Clocks, electric	Nov. 26, 1889
416,169	Keith, N. S.	Regulators	Dec. 3, 1889
416,189	Stone, J. B.	Cords and ropes	Dec. 3, 1889
416,191	Tesla, N.	Motors, alternating	Dec. 3, 1889
416,192	Tesla, N.	do	Dec. 3, 1889
416,193	Tesla, N.	do	Dec. 3, 1889
416,194	Tesla, N.	do	Dec. 3, 1889
416,195	Tesla, N.	do	Dec. 3, 1889
416,234	Perot, E. S.	Conductors, underground	Dec. 3, 1889
416,235	Perot, E. S.	do	Dec. 3, 1889
416,240	Schmid, A.	Magneto-electric	Dec. 3, 1889

No.	NAME.	CLASS.	DATE.
416,243	Tirrell, J. P	Bells	Dec. 3, 1889
416,254	Cooley, C. A	Covering cord	Dec. 3, 1889
416,275	Scribner, C. E	Telephones, systems	Dec. 3, 1889
416,284	Adams, T. E	Connectors	Dec. 3, 1889
416,288	Delany, P. B	do	Dec. 3, 1889
416,289	Ellinwood, A. E	Locomotion	Dec. 3, 1889
416,299	Pumpelly, J. K	Batteries, secondary	Dec. 3, 1889
416,339	Lemp, H	Meters	Dec. 3, 1889
416,350	Thomson, E	do	Dec. 3, 1889
416,360	Dewey, M. W	Heaters	Dec. 3, 1889
416,366	Johnson, T. L	Locomotion	Dec. 3, 1889
416,368	Jordan, L. F	Drop-lights and hangers	Dec. 3, 1889
416,381	Smith, R. D. O	Alarms	Dec. 3, 1889
416,406	Frith, F. W	Railway signals	Dec. 3, 1889
416,443	Cooley, W. H	Magneto-electric	Dec. 3, 1889
416,444	Cooper, T	Telegraphy, fire	Dec. 3, 1889
416,447	Dawson, E. C	Drop-lights and hangers	Dec. 3, 1889
416,476	Lyon, E. H	Telephones, electric	Dec. 3, 1889
416,483	McMahon, J. P	Telegraphy, fire	Dec. 3, 1889
416,513	Speicher, J	do	Dec. 3, 1889
416,572	Conz, G. W. M	Telegraphy, circuit-closers	Dec. 3, 1889
416,573	Covert, D'E. S. and Pumpelly, J. K	Batteries, secondary	Dec. 3, 1889
416,604	Hansen, M. L	Meters	Dec. 3, 1889
416,605	Hansen, M. L	Batteries, secondary	Dec. 3, 1889
416,611	Hochhausen, W	Lighting, systems	Dec. 3, 1889
416,612	Hochhausen, W	Lights, systems and appliances	Dec. 3, 1889
416,632	Leber, L. H	Lights, incandescent	Dec. 3, 1889
416,635	Lungen, A	Igniting devices, automatic	Dec. 3, 1889
416,654	Thomson, W	Galvanometers	Dec. 3, 1889
416,655	Thomson, W	do	Dec. 3, 1889
416,662	Bartlett, S. H	Friction generators	Dec. 3, 1889
416,682	Laurence, W. B	Lamp-shades	Dec. 3, 1889
416,712	Carter, F. S	Annunciators	Dec. 10, 1889
416,713	Conklin, J. I	Railway signals	Dec. 10, 1889
416,720	Dalzell, J. A	Magneto-electric	Dec. 10, 1889
416,732	La Dow, O. D	Telegraphy, transmitters	Dec. 10, 1889
416,742	Redfield, C. L	Printing, matrix-making	Dec. 10, 1889
416,743	Redfield, C. L	do	Dec. 10, 1889
416,745	Rice, E. W., jr	Lamp-shades	Dec. 10, 1889
416,746	Rice, E. W., jr	Regulators	Dec. 10, 1889
416,754	Sack, J	Telephones, calls	Dec. 10, 1889
416,762	Thomson, E	Induction coils	Dec. 10, 1889
416,779	Gleason, E. P	Fire-engines, stationary	Dec. 10, 1889
416,803	Phillippi, F. A	Medical and surgical, body-wear	Dec. 10, 1889
416,808	Scribner, C. E	Telephones, systems	Dec. 10, 1889
416,809	Scribner, C. E	do	Dec. 10, 1889
416,847	McLaughlin, J	Lights, arc, special features	Dec. 10, 1889
416,862	Schardt, B. and Lutzenberger, W	Lights, arc, special features	Dec. 10, 1889
416,873	Tilghman, B. C	Heaters	Dec. 10, 1889
416,920	Jenkins, W. F	Locomotion	Dec. 10, 1889
416,971	Taylor, E. W	Alarms, burglar	Dec. 10, 1889
417,009	Eichemeyer, J. C	Telephones, electric	Dec. 10, 1889
417,013	Fowler, H. E	Heaters	Dec. 10, 1889
417,013	Goodridge, W. M	Telephones, systems	Dec. 10, 1889
417,052	Leibnitz, F. E	Indicators	Dec. 10, 1889
417,055	Logan, C. H	Batteries, secondary	Dec. 10, 1889
417,075	Newman, N	Igniting devices, automatic	Dec. 10, 1889
417,086	Pratt, C. R	Elevators	Dec. 10, 1889
417,087	Pratt, C. R	do	Dec. 10, 1889
417,088	Pumpelly, J. K	Batteries, secondary	Dec. 10, 1889
417,089	Rae, F. B	Regulators	Dec. 10, 1889
417,095	Saville, J. J. and Winspear, J. H	Locomotion	Dec. 10, 1889
417,101	Siersdorfer, M	Extinguishers, gas	Dec. 10, 1889
417,117	Thompson, A. C. and Newton, H. E	Alarms	Dec. 10, 1889
417,120	Van Depoele, C. J	Locomotion	Dec. 10, 1889
417,121	Van Depoele, C. J	do	Dec. 10, 1889
417,122	Van Depoele, C. J	do	Dec. 10, 1889
417,132	Baldwin, C. W	Applications, tools and machines	Dec. 10, 1889
417,158	Ernst, V. H	Batteries, secondary	Dec. 10, 1889
417,183	Hunter, J. H	Railway signals	Dec. 10, 1889
417,198	Newman, N	Igniting devices, automatic	Dec. 10, 1889
417,217	Baker, C. D. and Bronson, L. G	Telegraphy, relays and sounders	Dec. 17, 1889
417,258	Loy, I. W. and O'Toole, R	Railway signals	Dec. 17, 1889
417,259	Main, W	Locomotion	Dec. 17, 1889
417,271	O'Connell, J. J	Telephones, systems	Dec. 17, 1889
417,290	Sperry, E. A	Batteries, galvanic	Dec. 17, 1889
417,304	Wilson, J. C	Anti-induction devices	Dec. 17, 1889

No.	NAME.	CLASS.	DATE.
417,305	Wilson, J. C.	Anti-induction devices	Dec. 17, 1889
417,338	Ries, E. E.	Locomotion	Dec. 17, 1889
417,392	Mayer, E. L. and Liepmann, H.	Batteries, galvanic	Dec. 17, 1889
417,402	Balsley, U. H.	Conductors, anti-inductive	Dec. 17, 1889
417,407	Cooper, A. S.	Telegraphy, automatic	Dec. 17, 1889
417,436	Mayer, E. L. and Liepmann, H.	Batteries, galvanic	Dec. 17, 1889
417,438	McElroy, D. S.	Railway car	Dec. 17, 1889
417,458	Wolff, C. H.	Batteries, galvanic	Dec. 17, 1889
417,474	Diehl, P.	Motors	Dec. 17, 1889
417,487	Jenney, C. D.	Regulators	Dec. 17, 1889
417,497	Morgan, R. A., jr.	Cut-outs, mechanical	Dec. 17, 1889
417,501	Norton, H. L. and Cooke, F. W.	Time checks	Dec. 17, 1889
417,511	Rosebrugh, A. M. and T. R.	Anti-induction devices	Dec. 17, 1889
417,516	Shawhan, J. F.	Lights, arc, positive feed	Dec. 17, 1889
417,525	Stitzel, F.	Railways, automatic signals	Dec. 17, 1889
417,526	Stitzel, F. and Weinedel, C.	do	Dec. 17, 1889
417,654	Van Depoele, C. J.	Locomotion	Dec. 17, 1889
417,660	Barney, W. C.	Telephones, details	Dec. 17, 1889
417,668	Dihlmann, C.	Systems of distribution	Dec. 17, 1889
417,680	Pain, R. W.	Self-playing instruments, pneumatic	Dec. 17, 1889
417,685	Sawyer, H. H.	Lights, incandescent	Dec. 17, 1889
417,688	Tatham, J.	Conductors, underground	Dec. 17, 1889
417,694	Winsor, P. and Wurts, A.	Telegraphy, lightning arresters	Dec. 17, 1889
417,695	Winsor, P.	do	Dec. 17, 1889
11,047	Swan, J. W.	Batteries, secondary	Dec. 17, 1889
417,742	Prentiss, H. S.	Telegraphy, circuit-closers	Dec. 24, 1889
417,747	Short, S. H.	Locomotion	Dec. 24, 1889
417,753	Spellier, L. H.	Clocks, electric	Dec. 24, 1889
417,758	Von der Kammer, J.	Cut-outs, thermal	Dec. 24, 1889
417,763	Whilton, F. J.	Applications, general	Dec. 24, 1889
417,787	Packard, J. W.	Lights, sockets and keys	Dec. 24, 1889
417,788	Packard, J. W.	do	Dec. 24, 1889
417,789	Packard, J. W.	Lights, incandescent	Dec. 24, 1889
417,794	Schmid, A. and Tesla, N.	Magneto-electric	Dec. 24, 1889
417,814	Delany, P. B.	Batteries, galvanic	Dec. 24, 1889
417,842	Runkel, J. P.	Connectors	Dec. 24, 1889
417,920	Hunter, R. M.	Heaters	Dec. 24, 1889
417,923	Kneuper, F. J.	Induction coils	Dec. 24, 1889
417,926	Lanc, F. A.	Bells	Dec. 24, 1889
417,927	Lanc, F. A.	Clocks, electric	Dec. 24, 1889
417,928	Lane, F. A.	do	Dec. 24, 1889
417,931	Miatt, G. W.	Games and toys	Dec. 24, 1889
417,974	Blackwell, F. O.	Locomotion	Dec. 24, 1889
417,992	Dell, J.	Conductors, underground	Dec. 24, 1889
417,998	Emmet, W. Le R.	do	Dec. 24, 1889
418,041	Mitchell, N. C.	Separators	Dec. 24, 1889
418,069	Rogers, H. G.	Store service	Dec. 24, 1889
418,070	Rogers, H. G. and Coyie, A. M.	do	Dec. 24, 1889
418,071	Rogers, H. G.	do	Dec. 24, 1889
418,120	Gillett, W.	Magneto-electric, hand machines	Dec. 24, 1889
418,125	Hamblet, J.	Clocks, electric	Dec. 24, 1889
418,134	Julian, H. F.	Reducing and separating, metallurgy	Dec. 24, 1889
418,140	Osburn, H. G.	Batteries, secondary	Dec. 24, 1889
11,049	Cowley, J. T.	Store service	Dec. 24, 1889
418,198	Lemp, H. and Thomson, E.	Heaters	Dec. 31, 1889
418,227	Robinson, E. W.	Electrodes	Dec. 31, 1889
418,248	Tesla, N.	Motors, alternating	Dec. 31, 1889
418,249	Thomson, E.	Telegraphy, lightning arresters	Dec. 31, 1889
418,258	Wiley, E. C.	Railway signals	Dec. 31, 1889
418,270	Braun, D. J.	Lights, incandescent, special features	Dec. 31, 1889
418,284	Healy, C. L.	Telegraphy, quadruplex	Dec. 31, 1889
418,295	Redfield, L. L.	Printing, matrix making	Dec. 31, 1889
418,301	Wood, J. J.	Magneto-electric	Dec. 31, 1889
418,302	Wood, J. J.	Regulators	Dec. 31, 1889
418,303	Wood, J. J.	do	Dec. 31, 1889
418,322	Rounseville, G. L. B.	Telegraphy, fire	Dec. 31, 1889
418,369	Huff, G. E.	Insulators	Dec. 31, 1889
418,373	Libbey, H. W.	Locomotion	Dec. 31, 1889
418,402	Darling, W. H.	Car-brakes	Dec. 31, 1889
418,426	Thone, F.	Lights, sockets and keys	Dec. 31, 1889
418,443	Bunnell, J. H.	Telegraphy, relays and sounders	Dec. 31, 1889
418,444	Bunnell, J. H.	Lights, arc, gravity feed, gear-clutch	Dec. 31, 1889
418,472	Pratt, C. A.	Meters	Dec. 31, 1889
418,474	Saunderson, L.	Lights, filaments and carbons	Dec. 31, 1889
418,483	Woolf, A. E.	Batteries, secondary	Dec. 31, 1889
418,510	Fiske, B. A.	Indicators	Dec. 31, 1889
418,550	Burt, M. C.	Gas	Dec. 31, 1889

No.	NAME.	CLASS.	DATE.
418,551	Burt, M. C	Gas	Dec. 31, 1889
418,559	Frager, A. J	Meters	Dec. 31, 1889
418,560	Frost, E	Bells	Dec. 31, 1889
418,636	Baillard, G. C	Lights, incandescent, special features	Dec. 31, 1889
418,652	Patten, F. J	Transmission of power	Dec. 31, 1889
418,653	Patten, F. J	do	Dec. 31, 1889
418,654	Patten, F. J	Motors, alternating	Dec. 31, 1889
418,655	Patten, F. J	Transmission of power	Dec. 31, 1889
418,659	Stanley, W., jr	Regulators, alternating	Dec. 31, 1889
418,664	Dreyer, W	Printing, setting and distributing	Dec. 31, 1889
418,678	Blades, H. H	Motors	Jan. 7, 1890
418,682	Christie, G. E	Telephones, supports	Jan. 7, 1890
418,685	Claus, P. and Gengenbach, E	Magneto-electric	Jan. 7, 1890
418,700	Dey, H. E	Batteries, secondary	Jan. 7, 1890
418,701	Dey, H. E	Batteries, secondary, applications	Jan. 7, 1890
418,702	Dey, H. E	do	Jan. 7, 1890
418,703	Dey, H. E	do	Jan. 7, 1890
418,704	Duggan, J. A	Locomotion	Jan. 7, 1890
418,718	Henning, B. S	do	Jan. 7, 1890
418,748	Prescott, G. B., jr	Batteries, secondary, applications	Jan. 7, 1890
418,757	Scribner, C. E	Lights, arc	Jan. 7, 1890
418,758	Scribner, C. E	Lights, arc, positive feed, clutch	Jan. 7, 1890
418,766	Smith, J. B	Insulators	Jan. 7, 1890
418,778	Armstrong, C. G	Telegraphy, fire	Jan. 7, 1890
418,824	Sperry, E. A	Telegraphy, lightning arresters	Jan. 7, 1890
418,837	Armstrong, C. G	Batteries, galvanic	Jan. 7, 1890
418,843	Johnson, D. E	Locomotion	Jan. 7, 1890
418,850	Pendleton, J. H., Bryson, A. J. and Tiers, C.	Railway signals	Jan. 7, 1890
418,853	Storey, I. E	Magneto-electric	Jan. 7, 1890
418,855	Storey, I. E	Lights, sockets and keys	Jan. 7, 1890
418,856	Storey, I. E	Locomotion	Jan. 7, 1890
418,868	Finck, J	Annunciators	Jan. 7, 1890
418,871	Holt, G. A	Indicators	Jan. 7, 1890
418,889	Cooper, A. J. and Wigzell, E. E	Bathometers	Jan. 7, 1890
418,893	Hunter, R. M	Locomotion	Jan. 7, 1890
418,910	Cox, C. A. and J. F	Railway signals	Jan. 7, 1890
418,911	Dewey, M. W	Heaters	Jan. 7, 1890
418,912	Dewey, M. W	Systems of distribution	Jan. 7, 1890
418,975	Emme, C. A	Door bells	Jan. 7, 1890
418,987	Russell, E. C	Lights, arc, positive feed, gear-clutch	Jan. 7, 1890
419,013	Grimley, C. H	Medical and surgical, body-wear	Jan. 7, 1890
419,032	Coffin, C. L	Heaters	Jan. 7, 1890
419,033	Coffin, C. L	do	Jan. 7, 1890
419,059	Niles, H. B	Locomotion	Jan. 7, 1890
419,068	Randall, C. A	Printing, hand stamps	Jan. 7, 1890
419,096	Wynne, F	Locomotion	Jan. 7, 1890
419,111	Casey, F. M	Applications, tools and machines	Jan. 7, 1890
419,166	Williams, J. T	Locomotion	Jan. 7, 1890
11,953	Reitler, C. W	Medical and surgical, body-wear	Jan. 7, 1890
419,186	Culman, D. A., jr	Lamp shades	Jan. 14, 1890
419,245	Currie, S. C. C	Motors	Jan. 14, 1890
419,264	Kennelly, A. E	Meters	Jan. 14, 1890
419,282	O'Meara, J	Heaters	Jan. 14, 1890
419,305	Black, B. J	Locomotion	Jan. 14, 1890
419,309	Black, B. J. and Jenkins, W. F	do	Jan. 14, 1890
419,312	Bulluck, W	Alarms	Jan. 14, 1890
419,313	Cade, B	Telegraphy, railway-car	Jan. 14, 1890
419,314	Cade, B	Locomotion	Jan. 14, 1890
419,355	Pullman, A. B	Street cars, steam	Jan. 14, 1890
419,365	Seely, J. A	Connectors	Jan. 14, 1890
419,367	Shallenberger, O. B	Meters	Jan. 14, 1890
419,487	Wollensak, J. F	Telegraphy, circuit-closers	Jan. 14, 1890
419,524	Huber, J. H	Lamp shades	Jan. 14, 1890
419,588	Kitsee, I	Locomotion	Jan. 14, 1890
419,617	Lawton, C. H	Lights, sockets and keys	Jan. 14, 1890
419,618	Adams, T. E	Locomotion	Jan. 21, 1890
419,633	Burnley, W	Batteries, galvanic	Jan. 21, 1890
419,642	Cornog, I. P	Insulators	Jan. 21, 1890
419,645	Culbertson, J. N	Telephones, systems	Jan. 21, 1890
419,660	Gutmann, L	Systems of distribution	Jan. 21, 1890
419,661	Gutmann, L	Magneto-electric	Jan. 21, 1890
419,662	Gutmann, L	Systems of distribution	Jan. 21, 1890
419,663	Gutmann, L	do	Jan. 21, 1890
419,664	Gutmann, L	Motors, alternating	Jan. 21, 1890
419,673	Hicks, T. H	Locomotion	Jan. 21, 1890
419,674	Hollings, J. C	Lights, incandescent, special features	Jan. 21, 1890
419,709	Richter, C	Locomotion	Jan. 21, 1890

No.	NAME.	CLASS.	DATE.
419,710	Robbins, A. C	Telegraphy, fire, alarms and extinguishers	Jan. 21, 1890
419,727	Sorley, C	Batteries, secondary	Jan. 21, 1890
419,728	Sorley, C	do	Jan. 21, 1890
419,730	Stanley, L. T	Batteries, galvanic	Jan. 21, 1890
419,731	Stanley, L. T	Induction coils	Jan. 21, 1890
419,733	Story, C. B	Lights, incandescent, special features	Jan. 21, 1890
419,740	Wagner, F. C	Regulators	Jan. 21, 1890
419,753	Darling, W. H	Locomotion	Jan. 21, 1890
419,766	Glaeser, A	Magnetic locks and bolts	Jan. 21, 1890
419,771	Hawkesworth, R. W	Locomotion	Jan. 21, 1890
419,774	Iri-h, W. E	Batteries, galvanic	Jan. 21, 1890
419,776	Jones, A. B	Clocks, electric	Jan. 21, 1890
419,808	White, Le R. S	Motors	Jan. 21, 1890
419,829	Cobb, S. B	Lights, incandescent	Jan. 21, 1890
419,841	Dewey, M. W	Locomotion	Jan. 21, 1890
419,861	Marvin, H. N	Transmission of power	Jan. 21, 1890
419,862	Mehren, J. F	Batteries, secondary	Jan. 21, 1890
419,902	Wider, E	Telegraphy, fire, alarms and extinguishers	Jan. 21, 1890
419,923	Carpenter, H. H	Conductors	Jan. 21, 1890
419,924	Catz, J	Alarms	Jan. 21, 1890
419,962	Lane, G. M	Lights, incandescent, special features	Jan. 21, 1890
419,967	Lane, G. M	do	Jan. 28, 1890
420,057	Haight, H. J	Indicators	Jan. 28, 1890
420,070	Howey, W. J	Alarms, burglar	Jan. 28, 1890
420,077	Lemp, H	Lights, sockets and keys	Jan. 28, 1890
420,079	Marvin, H. N	Motors, alternating	Jan. 28, 1890
420,080	Marvin, H. N	Transmission of power	Jan. 28, 1890
420,091	O'Connell, J. J	Telephones, systems	Jan. 28, 1890
420,096	Pfluger, C. A	Telegraphy, lightning arresters	Jan. 28, 1890
420,101	Reno, J. W	Locomotion	Jan. 28, 1890
420,102	Richard, F	Indicators	Jan. 28, 1890
420,109	Scribner, C. E	Lights, arc, gravity feed, clutch	Jan. 28, 1890
420,117	Sperry, E. A	Regulators	Jan. 28, 1890
420,138	Wood, J. J	do	Jan. 28, 1890
420,139	Barringer, J. J. and Johnston, T. H	Street lamps	Jan. 28, 1890
420,171	Seely, J. A	Connectors	Jan. 28, 1890
420,173	Speicher, J	Telegraphy, fire	Jan. 28, 1890
420,183	Beach, F. G. and Cook, F. B	Telephones, systems	Jan. 28, 1890
420,198	Gnerrant, G. M	Lighting, systems	Jan. 28, 1890
420,214	Smith, W. F	Meters	Jan. 28, 1890
420,217	Thompson, W. and Gartner, A	Indicators	Jan. 28, 1890
420,234	Johnson, G. A	Batteries, secondary	Jan. 28, 1890
420,240	McLaughlin, J. F	Telegraphy, printing	Jan. 28, 1890
420,255	Taylor, J. D	Telephones, calls	Jan. 28, 1890
420,300	Hicks, T. H	Electrodes	Jan. 28, 1890
420,314	Scheffbauer, R	Lights, arc, gravity feed, gear-clutch	Jan. 28, 1890
420,334	Conkling, G	Separators	Jan. 28, 1890
420,351	Musie, G	Automatic devices	Jan. 28, 1890
420,358	Rogers, J. H	Telegraphy, printing	Jan. 28, 1890
420,370	Wightman, M. J	Lights, sockets and keys	Jan. 28, 1890
420,384	Holcombe, A. G	Telegraphy, fire	Jan. 28, 1890
420,391	Rice, E. W., jr	Lights, incandescent, special features	Jan. 28, 1890
420,393	Shafer, B. F	Transmitters	Jan. 28, 1890
420,396	Thomson, E	Inductoriuns, transformers, stationary	Jan. 28, 1890
420,398	Waterhouse, A. G	Regulators	Jan. 28, 1890
420,422	Warner, E. P	Galvanometers	Jan. 28, 1890
420,444	Farrell, G	Cut-outs, thermal	Feb. 4, 1890
420,469	Serrell, L. W. and Lufkin, H. L	Regulators	Feb. 4, 1890
420,500	Storey, I. E	Drills	Feb. 4, 1890
420,543	Peckham, E	Street cars, steam	Feb. 4, 1890
420,544	Peckham, E	Street cars	Feb. 4, 1890
420,545	Peckham, E	Railway cars, axles	Feb. 4, 1890
420,552	Brown, J. E. and J. F	Lights, incandescent, special features	Feb. 4, 1890
420,594	Edison, T. A	Telegraphy, quadruplex	Feb. 4, 1890
420,611	Stephens, J. E	Medical and surgical, body-wear	Feb. 4, 1890
420,622	Dickerson, E. N	Cut-outs, electro-magnetic	Feb. 4, 1890
420,635	Stieringer, L	Insulators	Feb. 4, 1890
420,638	Conner, W. A	Conductors	Feb. 4, 1890
420,641	Dewey, M. W	Heaters	Feb. 4, 1890
420,648	Williams, J. B	do	Feb. 4, 1890
420,649	Williams, J. M	Indicators	Feb. 4, 1890
420,693	McElroy, D. S	Car brakes	Feb. 4, 1890
420,697	Powell, N. M	Alarms, burglar	Feb. 4, 1890
420,705	Stewart, J	Lights, sockets and keys	Feb. 4, 1890
420,706	Stewart, J	do	Feb. 4, 1890
420,710	Bache, R. M	Electrodes	Feb. 4, 1890
420,740	Sheffield, A. J	Medical and surgical, body-wear	Feb. 4, 1890

No.	NAME.	CLASS.	DATE.
420,762	Bishop, J. D	Meters	Feb. 4, 1890
420,764	Bradley, C. S	Batteries, thermal	Feb. 4, 1890
420,771	Clark, J. H	Applications, tools and machines	Feb. 4, 1890
420,777	Davis, F. E. and Scott, J., jr	Covering cord	Feb. 4, 1890
420,804	Johnson, D. E	Locomotion	Feb. 4, 1890
420,816	Marvin, H. N	Transmission of power	Feb. 4, 1890
420,833	Robertson, J. H	Telegraphy, automatic	Feb. 4, 1890
420,834	Seib, G. A	Magnetic locks and bolts	Feb. 4, 1890
420,840	Thomas, M. E	Medical and surgical, body-wear	Feb. 4, 1890
420,850	Wood, F. B	Recorders	Feb. 4, 1890
420,851	Wood, F. B	do	Feb. 4, 1890
420,852	Wood, F. B	do	Feb. 4, 1890
420,858	Boss, G. W	Railway signals	Feb. 4, 1890
420,859	Boss, G. W	do	Feb. 4, 1890
420,881	Langhans, R	Lights, filaments and carbons	Feb. 4, 1890
420,882	Lemp, H. and Wightman, M. J	Regulators	Feb. 4, 1890
420,884	Mercadier, E. J. P	Telegraphy, multiplex	Feb. 4, 1890
420,890	Randall, C. A	Indicators	Feb. 4, 1890
420,894	Thomson, W	Rheostats	Feb. 4, 1890
420,906	Johnson, W. S	Batteries, secondary, applications	Feb. 4, 1890
420,924	Waterhouse, A. G	Magneto-electric	Feb. 4, 1890
420,936	Hall, O. S	Medical and surgical, body-wear	Feb. 11, 1890
420,954	Nutting, S. E	Applications, general	Feb. 11, 1890
420,955	Nutting, S. E	do	Feb. 11, 1890
420,964	Robinson, W. H	Indicators	Feb. 11, 1890
420,975	Sorley, C	Batteries, secondary	Feb. 11, 1890
420,984	Bayne, G. G	Telegraphy, lightning arresters	Feb. 11, 1890
421,006	Libbey, H. W	Telephones, magnetic	Feb. 11, 1890
421,011	Newland, G. F	Telephones, details	Feb. 11, 1890
421,014	Polk, W. R	Automatic fans	Feb. 11, 1890
421,048	Heymann, E. and F. W	Regulators	Feb. 11, 1890
421,053	Nutting, S. E	do	Feb. 11, 1890
421,067	Currie, S. C. C	Electro-magnets	Feb. 11, 1890
421,081	Mehren, J. F	Batteries, galvanic	Feb. 11, 1890
421,088	Tyler, W. P	Conductors, underground	Feb. 11, 1890
421,090	Anthony, W. A	Motors	Feb. 11, 1890
421,114	Stewart, W. M	Telephones, switch-boards	Feb. 11, 1890
421,169	Hewett, E. M. G	Batteries, galvanic	Feb. 11, 1890
421,177	Lemp, H	Cut-outs, electro-magnetic	Feb. 11, 1890
421,179	Little, E. W	Cut-outs, mechanical	Feb. 11, 1890
421,180	Little, E. W	Cut-outs, thermal	Feb. 11, 1890
421,185	Miner, W. M	Heaters	Feb. 11, 1890
421,193	Rice, E. W., jr	Motors, alternating	Feb. 11, 1890
421,195	Ross, F. and Franzen, A	Regulators	Feb. 11, 1890
421,207	Thomson, E	Cut-outs, electro-magnetic	Feb. 11, 1890
421,208	Thomson, E	Systems of distribution	Feb. 11, 1890
421,214	White, G. W	Telegraphy, relays and sounders	Feb. 11, 1890
421,222	Alton, G. H. and Wakefield, W. O	Magneto-electric	Feb. 11, 1890
421,239	Cable, P. D	Railway signals	Feb. 11, 1890
421,240	Cardew, P	Cut-outs, thermal	Feb. 11, 1890
421,294	Lyke, N	Medical and surgical, bath	Feb. 11, 1890
421,304	Rae, F. B	Locomotion	Feb. 11, 1890
421,305	Rae, F. B	do	Feb. 11, 1890
421,320	Schmid, A. and Means, E. C	Magneto-electric	Feb. 11, 1890
421,339	Wollensak, J. F	Alarms, burglar	Feb. 11, 1890
421,340	Wollensak, J. F	Telegraphy, circuit-closers	Feb. 11, 1890
421,371	Cutler, J. L	Telephones, calls	Feb. 11, 1890
421,394	Foley, J. S	Telegraphy, railway car	Feb. 18, 1890
421,396	Frei, G. A	Cut-outs, thermal	Feb. 18, 1890
421,398	Griffin, P. H	Locomotion	Feb. 18, 1890
421,429	Sbipway, T. H. and Dowdell, J. R	Annunciators	Feb. 18, 1890
421,449	Stout, J. V	Valve-controllers	Feb. 18, 1890
421,457	Wadleigh, M	Medical and surgical, body-wear	Feb. 18, 1890
421,464	Wirt, H. C	Locomotion	Feb. 18, 1890
421,469	Adeney, W. E. and Saunderson, L	Lights, filaments and carbons	Feb. 18, 1890
421,479	Brace, De W. B	Magneto-electric	Feb. 18, 1890
421,484	Davis, G. E	Photography, cameras	Feb. 18, 1890
421,498	Hubinger, J. C	Heaters	Feb. 18, 1890
421,499	Hubinger, J. C	do	Feb. 18, 1890
421,508	Parks, A. F	Annunciators	Feb. 18, 1890
421,530	Straight, G. H	do	Feb. 18, 1890
421,535	Wheeler, F	Locomotion	Feb. 18, 1890
421,567	Grah, W., jr	Magnetic locks and bolts	Feb. 18, 1890
421,586	Kookogey, W. P	Lights, sockets and keys	Feb. 18, 1890
421,594	Michales, M. A	Mining machines	Feb. 18, 1890
421,630	Stewart, J	Lights, sockets and keys	Feb. 18, 1890
421,636	Titus, E. C	Telephones, switches	Feb. 18, 1890

No.	NAME.	CLASS.	DATE.
421,666	Carpenter, H. H.	Batteries, secondary	Feb. 18, 1890
421,677	Cunningham, J. H.	Locomotion	Feb. 18, 1890
421,733	Liedtke, E. L.	Lights, filaments and carbons	Feb. 18, 1890
421,781	Stoughton, J. A.	Conductors	Feb. 18, 1890
421,790	Walsh, P. B.	Motors	Feb. 18, 1890
421,791	Walter, W. C.	Railway signals	Feb. 18, 1890
421,800	Whitney, R. W. and Cowles, B. K.	Telephones, details	Feb. 18, 1890
421,801	Willms, C. and Leibig, G. A., jr.	Batteries, galvanic	Feb. 18, 1890
421,802	Wollensak, J. F.	Connectors	Feb. 18, 1890
421,819	Davy, J. W.	Insulators	Feb. 18, 1890
421,851	Bock, L., jr.	Indicators	Feb. 18, 1890
421,852	Bulen, G. F.	Thermostats	Feb. 18, 1890
421,853	Bulen, G. F.	Telegraphy, fire	Feb. 18, 1890
421,854	Bulen, G. F.	do	Feb. 18, 1890
421,864	Layng, W. H.	Lights, incandescent, special features	Feb. 18, 1890
421,882	Seiler, P.	Telegraphy, fire	Feb. 18, 1890
421,887	Adair, J.	Locomotion	Feb. 25, 1890
421,911	Diehl, P.	Motors	Feb. 25, 1890
421,916	Entz, J. B. and Phillips, W. A.	Batteries, secondary	Feb. 25, 1890
421,967	Pfatscher, M.	Magneto-electric	Feb. 25, 1890
421,968	Phillips, E. F.	Conductors	Feb. 25, 1890
421,983	Souders, M. M.	Railway signals	Feb. 25, 1890
422,058	McIntire, C.	Connectors	Feb. 25, 1890
422,072	Edison, T. A.	Telegraphy, duplex	Feb. 25, 1890
422,073	Edison, T. A.	Telegraphy, circuits and systems	Feb. 25, 1890
422,074	Edison, T. A.	Telegraphy, duplex	Feb. 25, 1890
422,082	Ladd, H. W.	Telephones, mechanical	Feb. 25, 1890
422,096	Short, S. H.	Locomotion	Feb. 25, 1890
422,107	Ayer, C. H.	Medical and surgical, body-wear	Feb. 25, 1890
422,147	Parker, W. E. and Temple, H. E.	Cut-outs, mechanical	Feb. 25, 1890
422,148	Parkhurst, E. B.	Motors	Feb. 25, 1890
422,149	Parkhurst, E. B.	do	Feb. 25, 1890
422,164	Stearns, C. K. and Wheeler, G. K.	Locomotion	Feb. 25, 1890
422,174	Bartlett, S. H. and Waite, H. E.	Telephones, details	Feb. 25, 1890
422,190	Dewey, M. W.	Heaters	Feb. 25, 1890
422,196	Flora, E. E. and Hoy, P. R.	Lights, incandescent, special features	Feb. 25, 1890
422,201	Fryer, G. G.	Motors, reciprocating	Feb. 25, 1890
422,216	Hollingshead, W. B.	Batteries, secondary	Feb. 25, 1890
422,219	Jaeger, H. J.	Air and gas pumps, pneumatic	Feb. 25, 1890
422,244	Muckle, M. R., jr., and Smith, T. C.	Conductors, underground	Feb. 25, 1890
422,265	Van Depoele, C. J.	Magneto-electric	Feb. 25, 1890
422,266	Van Depoele, C. J.	Locomotion	Feb. 25, 1890
422,295	Cooper, W. B.	Magneto-electric	Feb. 25, 1890
422,300	Hartmann, C. J.	Batteries, secondary	Feb. 25, 1890
422,301	Hartmann, C. J.	do	Feb. 25, 1890
422,302	Head, H. H. and Sanderson, L.	Lights, filaments and carbons	Feb. 25, 1890
422,308	Lyte, F. M.	Batteries, secondary	Feb. 25, 1890
422,326	Villiers-Stead, F. and Hedgman, E. R.	Vending apparatus	Feb. 25, 1890
422,339	Farnham, I. H.	Locomotion	Feb. 25, 1890
422,354	Rae, F. B.	Telegraphy, lightning arresters	Feb. 25, 1890
422,360	Wollin, W. F. and Werline, E. H.	Lights, sockets and keys	Feb. 25, 1890
422,419	Jenney, C. D.	Magneto-electric	Mar. 4, 1890
422,438	Pennock, G. B.	Batteries, secondary, applications	Mar. 4, 1890
422,445	Priest, E. D.	Locomotion	Mar. 4, 1890
422,446	Pyle, G. C.	Lights, arc, positive feed, gear-clutch	Mar. 4, 1890
422,456	Smith, W. F.	Lights, filaments and carbons	Mar. 4, 1890
422,457	Sorley, C.	Batteries, secondary	Mar. 4, 1890
422,500	Castner, H. Y.	Electrolysis, chemicals	Mar. 4, 1890
422,504	Currie, S. C. C.	Batteries, secondary	Mar. 4, 1890
422,505	Currie, S. C. C.	do	Mar. 4, 1890
422,511	Eickemeyer, R.	Magneto-electric	Mar. 4, 1890
422,512	Eickemeyer, R.	Electro-magnets	Mar. 4, 1890
422,524	Happoldt, M. C.	Cut-outs, electro-magnetic	Mar. 4, 1890
422,533	Kookogey, W. P.	Batteries, secondary	Mar. 4, 1890
422,534	Linville, J. H.	Batteries, galvanic	Mar. 4, 1890
422,550	Thomson, E.	Magneto-electric	Mar. 4, 1890
422,556	Walter, H. E.	Motors	Mar. 4, 1890
422,577	Edison, T. A. and Gilliland, E. T.	Anti-induction devices	Mar. 4, 1890
422,578	Edison, T. A.	Telephones, relays and repeaters	Mar. 4, 1890
422,579	Edison, T. A.	do	Mar. 4, 1890
422,591	Hayden, W. W. and Diekman, C. S.	Drop-lights and hangers	Mar. 4, 1890
422,592	Holman, F.	Lamp shades	Mar. 4, 1890
422,604	Mahnken, H.	Telegraphy, printing	Mar. 4, 1890
422,614	Nolan, E. J.	Type-writing	Mar. 4, 1890
422,616	Olney, W. D.	Horology, watch balances	Mar. 4, 1890
422,634	Rockwell, F. C.	Lights, sockets and keys	Mar. 4, 1890
422,645	Short, S. H.	Locomotion	Mar. 4, 1890

No.	NAME.	CLASS.	DATE.
422,651	Stanley, G. E.	Insulators	Mar. 4, 1890
422,654	Suren, N. H.	Annunciators	Mar. 4, 1890
422,672	Waring, J.	Galvanometers	Mar. 4, 1890
422,681	Wray, J. C.	Magneto-electric	Mar. 4, 1890
422,705	Berrenberg, A. and Umbehend, J.	Cut-outs, mechanical	Mar. 4, 1890
422,722	Carpenter, H. L.	Telephones, calls	Mar. 4, 1890
422,730	Coffin, C. L.	Heaters	Mar. 4, 1890
422,732	Conkling, G.	Separators	Mar. 4, 1890
422,746	Von Dolivo-Dobrowolsky, M.	Inductoriums, transformers, rotary	Mar. 4, 1890
422,755	De Ferranti, S. Z.	Motors, alternating	Mar. 4, 1890
422,765	Gould, C. C.	Telephones, systems	Mar. 4, 1890
422,773	Hamilton, C. J.	Annunciators	Mar. 4, 1890
422,802	Kennedy, J. C.	Inhalers and respirators	Mar. 4, 1890
422,803	Kildoyle, E. E.	Alarms	Mar. 4, 1890
422,811	Lemaire, P. C. J.	Chandeliers	Mar. 4, 1890
422,855	Van Depoele, C. J.	Transmission of power	Mar. 4, 1890
422,856	Van Depoele, C. J.	do	Mar. 4, 1890
422,857	Van Depoele, C. J.	do	Mar. 4, 1890
422,858	Van Depoele, C. J.	do	Mar. 4, 1890
422,859	Van Depoele, C. J.	do	Mar. 4, 1890
422,860	Van Depoele, C. J.	do	Mar. 4, 1890
422,862	Washburn, G. A.	Regulators	Mar. 4, 1890
422,863	Washburn, G. A.	Magneto-electric	Mar. 4, 1890
422,876	Bower, J. F.	Spring scales	Mar. 4, 1890
422,885	Hoyt, A. H.	Induction coils	Mar. 4, 1890
422,895	Smith, W. F.	Lights, filaments and carbons	Mar. 4, 1890
422,910	Brown, H. P.	Lighting, systems	Mar. 11, 1890
422,911	Butterfield, H. R.	Motors	Mar. 11, 1890
422,925	D'Infreville, G.	Batteries, galvanic	Mar. 11, 1890
422,948	Kilbourn, W. H.	Applications, tools and machines	Mar. 11, 1890
422,956	Malmborg, E. R.	Valve-controllers	Mar. 11, 1890
422,968	Paine, W. J.	Applications, tools and machines	Mar. 11, 1890
422,975	Rice, E. W., jr.	Regulators	Mar. 11, 1890
422,976	Roberts, H. P.	Locomotion	Mar. 11, 1890
422,981	Shafer, B. F.	Annunciators	Mar. 11, 1890
422,999	Thomson, E. and Rohrer, A. L.	Magneto-electric	Mar. 11, 1890
423,004	Vogler, W.	Locomotion	Mar. 11, 1890
423,005	Vogler, W.	do	Mar. 11, 1890
423,014	Woodbury, L. S.	Bells	Mar. 11, 1890
423,023	Bruner, A.	Conductors, underground	Mar. 11, 1890
423,026	Cohen, R. L.	Magneto-electric	Mar. 11, 1890
423,029	Currie, S. C. C.	Regulators	Mar. 11, 1890
423,091	Sorley, C.	Batteries, secondary	Mar. 11, 1890
423,101	Winslow, W. H.	Coating with metal	Mar. 11, 1890
423,102	Wood, J. J.	Cut-outs, thermal	Mar. 11, 1890
423,134	Cope, T. J.	Conductors, underground	Mar. 11, 1890
423,207	Baner, A. H.	Lights, incandescent, special features	Mar. 11, 1890
423,210	Blathy, O. T.	Meters	Mar. 11, 1890
423,223	Dewey, M. W.	Heaters	Mar. 11, 1890
423,229	Emery, S. S.	Telegraphy, repeaters	Mar. 11, 1890
423,245	Hart, A. W.	Applications, tools and machines	Mar. 11, 1890
423,286	Smith, W. C.	Telegraphy, fire, alarms and extinguishers	Mar. 11, 1890
423,299	Wolf, J. J.	Telephones, details	Mar. 11, 1890
423,309	Chamberlain, J. C.	Magneto-electric	Mar. 11, 1890
423,310	Chamberlain, R. N. and J. C.	Batteries, secondary	Mar. 11, 1890
423,317	Heald, A.	Gas burners, incandescent	Mar. 11, 1890
423,324	Johnson, W. A. and Smith, J. N.	Batteries, secondary	Mar. 11, 1890
423,335	Moorthamers, L.	Batteries, galvanic	Mar. 11, 1890
423,344	Retter, A.	Drills	Mar. 11, 1890
423,361	Wallace, J. S.	Applications, general	Mar. 11, 1890
423,385	Miesse, A.	Alarms	Mar. 11, 1890
423,391	Rae, F. B.	Locomotion	Mar. 11, 1890
423,400	Voss, D. C.	do	Mar. 11, 1890
423,405	Barton, S.	Ships, submarine and torpedo	Mar. 11, 1890
423,421	Farrall, T. D.	Heaters	Mar. 18, 1890
423,449	Seely, J. A.	Conductors	Mar. 18, 1890
423,462	Whittingham, G. H.	Motors	Mar. 18, 1890
423,468	Campbell, G. G.	Locomotion	Mar. 18, 1890
423,487	McCullough, G. C.	Telegraphy, fire	Mar. 18, 1890
423,488	McEvoy, T. F.	Cut-outs, mechanical	Mar. 18, 1890
423,494	Scribner, C. E.	Annunciators	Mar. 18, 1890
423,495	Seymour, H. A.	Locomotion	Mar. 18, 1890
423,527	Miller, G. E.	do	Mar. 18, 1890
423,549	Brunning, C. E.	Medical and surgical, body-wear	Mar. 18, 1890
423,552	Gutmann, L.	Locomotion	Mar. 18, 1890
423,553	Gutmann, L.	Regulators, alternating	Mar. 18, 1890
423,575	Sack, J.	Telephones, calls	Mar. 18, 1890

No.	NAME.	CLASS.	DATE.
423,594	Clark, M. M	Batteries, galvanic	Mar. 18, 1890
423,600	Frei, G. A	Galvanometers	Mar. 18, 1890
423,616	Manker, C. W. and G. F	Induction coils	Mar. 18, 1890
423,617	Manker, C. W. and G. F	do	Mar. 18, 1890
423,632	Rothenberg, W. F	Bridges, towers	Mar. 18, 1890
423,637	Scribner, C. E	Lights, arc, special features	Mar. 18, 1890
423,638	Scribner, C. E	Cut-outs, electro-magnetic	Mar. 18, 1890
423,654	Amet, E. H	Applications, general	Mar. 18, 1890
423,680	Fuller, J. A	Water gages, float	Mar. 18, 1890
423,697	Pinolet, L. M	Bells	Mar. 18, 1890
423,707	Stanley, A. F	do	Mar. 18, 1890
423,708	Tirmann, H	Friction generators	Mar. 18, 1890
423,732	Coffin, C. L	Heaters	Mar. 18, 1890
423,733	Coffin, C. L	do	Mar. 18, 1890
423,734	Coffin, C. L	do	Mar. 18, 1890
423,735	Coffin, C. L	do	Mar. 18, 1890
423,736	Coffin, C. L	do	Mar. 18, 1890
423,753	Gee, W	Alarms, burglar	Mar. 18, 1890
423,788	Maxwell, G. S	Telegraphy, lightning arresters	Mar. 18, 1890
423,807	Pieper, H., fils	Lights, arc and incandescent	Mar. 18, 1890
423,873	Pieper, H., fils	do	Mar. 18, 1890
423,874	Lineff, A. L	Locomotion	Mar. 18, 1890
423,886	Toulmin, M	Fences, railway gates, electric	Mar. 18, 1890
423,891	Barriett, S. L	Motors	Mar. 18, 1890
11,067	Griswold, L. F	Drop-lights and hangers	Mar. 18, 1890
423,897	Baxter, W., jr	Regulators	Mar. 25, 1890
423,901	Brown, R. G	Telegraphy, multiplex	Mar. 25, 1890
423,902	Brown, R. G	do	Mar. 25, 1890
423,903	Brown, R. G	do	Mar. 25, 1890
423,907	Conkling, G	Separators	Mar. 25, 1890
423,909	Cooley, H. W	Regulators	Mar. 25, 1890
423,912	Diehl, P	Magneto-electric	Mar. 25, 1890
42,956	Ross, R	Heaters	Mar. 25, 1890
423,959	Schmauser, T	Batteries, galvanic	Mar. 25, 1890
423,965	Thomson, E	Applications, general	Mar. 25, 1890
423,966	Thomson, E	Heaters	Mar. 25, 1890
423,967	Thomson, E	do	Mar. 25, 1890
423,975	Wightman, M. J	Motors	Mar. 25, 1890
423,991	De Ferranti, S. Z	Magneto-electric	Mar. 25, 1890
424,006	Davies, C. L	Telegraphy, circuits and systems	Mar. 25, 1890
424,012	MacMaster, M. A	Electrodes	Mar. 25, 1890
424,036	Tesla, N	Motors, alternating	Mar. 25, 1890
424,047	Butterfield, H. R. and Mitchell, W	Heaters	Mar. 25, 1890
424,057	Gilman, C. C	Conductors, underground	Mar. 25, 1890
424,062	Hazard, R. R	Railway cars, trucks	Mar. 25, 1890
424,065	Jenney, C. D	Magneto-electric	Mar. 25, 1890
424,070	Mansfield, G. W	Locomotion	Mar. 25, 1890
424,082	Thompson, W	do	Mar. 25, 1890
424,110	Harris, S	do	Mar. 25, 1890
424,152	Wardwell, H. H	Batteries, secondary	Mar. 25, 1890
424,182	Dempf, J. A	Telegraphy, circuit-closers	Mar. 25, 1890
424,206	Hunter, R. M	Locomotion	Mar. 25, 1890
424,207	Hunter, R. M	do	Mar. 25, 1890
424,209	Jones, F. W	Telegraphy, quadruplex	Mar. 25, 1890
424,219	Reed, W. G	Telegraphy, circuit-closers	Mar. 25, 1890
424,229	Seely, J. A	Cut-outs, thermal	Mar. 25, 1890
424,268	Carr, R. B	Time checks	Mar. 25, 1890
424,273	Colby, E. A. and Strong, J. C	Clocks, electric	Mar. 25, 1890
424,295	Kaslan, J. P	Knitting and netting, stopping	Mar. 25, 1890
424,298	Henry, J. C	Locomotion	Mar. 25, 1890
424,310	Kellogg, M. G	Telephones, systems	Mar. 25, 1890
424,338	McKinney, W	Meters	Mar. 25, 1890
424,339	McLaughlin, J. F	Batteries, secondary, applications	Mar. 25, 1890
424,340	McLaughlin, J. F	Locomotion	Mar. 25, 1890
424,363	Singer, W. F	Thermostats	Mar. 25, 1890
424,364	Slentz, E. P. and McGrew, J. B	Locomotion	Mar. 25, 1890
424,371	Stephenson, J	Street cars, steam	Mar. 25, 1890
424,372	Stephenson, J	do	Mar. 25, 1890
424,373	Stephenson, J	do	Mar. 25, 1890
424,374	Stephenson, J	Locomotion	Mar. 25, 1890
424,380	Van Depoele, C. J	do	Mar. 25, 1890
424,381	Van Depoele, C. J	do	Mar. 25, 1890
424,387	Watson, N. M	Alarms, burglar	Mar. 25, 1890
424,401	Bagby, W. J	Meters	Mar. 25, 1890
424,403	Butterfield, H. R	Heaters	Mar. 25, 1890
424,404	Butterfield, H. R. and Mitchell, W	do	Mar. 25, 1890
424,406	Crane, W. F. D	Magneto-electric	Mar. 25, 1890

No.	NAME.	CLASS.	DATE.
424,431	Pearce, F.	Telegraphy, fire	Mar. 25, 1890
424,436	Sprague, F. J.	Locomotion	Mar. 25, 1890
424,441	Wood, W. M.	Heaters	Mar. 25, 1890
424,442	Wood, W. M.	Projectiles	Mar. 25, 1890
424,535	Bock, L., jr.	Motors	Apr. 1, 1890
424,544	Donnelly, A. G.	Fog signals	Apr. 1, 1890
424,562	Loomis, O. P.	Telegraphy, lightning arresters	Apr. 1, 1890
424,563	Loomis, O. P.	do	Apr. 1, 1890
424,575	Reed, T. S.	Conductors	Apr. 1, 1890
424,595	Bergmann, S. and Scott, G. B.	Regulators	Apr. 1, 1890
424,606	Gutmann, L.	Systems of distribution	Apr. 1, 1890
424,607	Hunter, R. M.	Locomotion	Apr. 1, 1890
424,635	Wood, F. B.	Telephones, calls	Apr. 1, 1890
424,665	Young, C. G.	Regulators	Apr. 1, 1890
424,695	Van Depoele, C. J.	Locomotion	Apr. 1, 1890
424,699	Bentley, E. M.	do	Apr. 1, 1890
424,703	Clarke, G. D.	Electro-magnets	Apr. 1, 1890
424,725	Porter, M. D.	Annunciators	Apr. 1, 1890
424,726	Porter, M. D.	do	Apr. 1, 1890
424,729	Scherer, F.	Applications, general	Apr. 1, 1890
424,734	Smith, L. T.	Motors, alternating	Apr. 1, 1890
424,739	Van Nuis, C. S.	Cut-outs, mechanical	Apr. 1, 1890
424,743	Weinberg, S. S.	Telegraphy, fire, alarms and extinguishers	Apr. 1, 1890
424,751	Barrett, J. A.	Conductors	Apr. 1, 1890
424,752	Beach, R. H.	Lights, arc, positive feed	Apr. 1, 1890
424,761	Conroy, J. C.	Valve-controllers	Apr. 1, 1890
424,786	Hill, E. A.	Medical and surgical, body-wear	Apr. 1, 1890
424,809	McLaughlin, J. F.	Batteries, secondary	Apr. 1, 1890
424,810	McLaughlin, J. F.	Locomotion	Apr. 1, 1890
424,817	Patton, W. H.	do	Apr. 1, 1890
424,818	Perret, F. A.	do	Apr. 1, 1890
424,827	Shelton, W. J.	Medical and surgical, body-wear	Apr. 1, 1890
424,845	Bentley, E. M.	Locomotion	Apr. 1, 1890
424,848	Blackwell, F. O.	do	Apr. 1, 1890
424,860	Cox, C. A. and J. F.	Telegraphy, fire, alarms and extinguishers	Apr. 1, 1890
424,866	Dulait, J.	Lights, arc, gravity feed, gear-clutch	Apr. 1, 1890
424,887	Knight, W. H.	Locomotion	Apr. 1, 1890
424,888	Knight, W. H.	do	Apr. 1, 1890
424,891	Lowrie, W., Hall, C. J. and Kollé, H. W.	Meters	Apr. 1, 1890
424,910	Van Depoele, C. J.	Locomotion	Apr. 1, 1890
424,911	Van Depoele, C. J.	do	Apr. 1, 1890
424,921	Capek, J. V.	Heaters	Apr. 1, 1890
424,922	Capek, J. V.	do	Apr. 1, 1890
424,928	Hunter, R. M.	Locomotion	Apr. 1, 1890
424,929	Lindenau, E. W.	Clocks, electric	Apr. 1, 1890
424,935	Reid, E. S.	Conductors, underground	Apr. 1, 1890
11,068	Regan, D. S.	Air and gas engines, explosive	Apr. 1, 1890
424,993	McCluer, C. E.	Telephones, systems	Apr. 8, 1890
424,995	Owen, E. A.	Telephones, switch-boards	Apr. 8, 1890
424,997	Prest, J. E.	Cordage, warping	Apr. 8, 1890
425,004	Schnitz, R.	Time-alarms	Apr. 8, 1890
425,038	Maynadier, J. E.	Locomotion	Apr. 8, 1890
425,058	Warner, E. P.	Telephones, switches	Apr. 8, 1890
425,061	Bishop, J. D.	Telegraphy, lightning arresters	Apr. 8, 1890
425,066	Etheridge, H.	Telegraphy, automatic	Apr. 8, 1890
425,068	Garver, M. M.	Galvanometers	Apr. 8, 1890
425,069	Garver, M. M.	do	Apr. 8, 1890
425,071	Greene, L. R.	Bridges, girders and columns	Apr. 8, 1890
425,076	Hunter, R. M.	Locomotion	Apr. 8, 1890
425,077	Hunter, R. M.	do	Apr. 8, 1890
425,078	Hynes, M.	Annunciators	Apr. 8, 1890
425,086	Robertson, J. H.	Telephones, systems	Apr. 8, 1890
425,089	Singer, W. F.	Telegraphy, fire, alarms and extinguishers	Apr. 8, 1890
425,101	Kilian, C. J.	Locomotion	Apr. 8, 1890
425,106	Nichols, E. I.	Motors	Apr. 8, 1890
425,107	Penney, H. E.	Locomotion	Apr. 8, 1890
425,125	Douglass, A.	Lighting, systems	Apr. 8, 1890
425,135	Kookogey, W. P.	Batteries, galvanic	Apr. 8, 1890
425,143	Moran, J.	Alarms, burglar	Apr. 8, 1890
425,161	Cassard, H. L.	Telephones, systems	Apr. 8, 1890
425,164	Coffin, C. L.	Heaters	Apr. 8, 1890
425,202	Blanchard, S. W.	Elevators	Apr. 8, 1890
425,205	Ensh, A. R.	Cut-outs, mechanical	Apr. 8, 1890
425,269	Thompson, M. E.	Meters	Apr. 8, 1890
425,270	Thompson, M. E.	do	Apr. 8, 1890
425,335	Marx, F.	Batteries, galvanic	Apr. 8, 1890
425,370	Coyle, A. M.	Vending apparatus	Apr. 8, 1890

No.	NAME.	CLASS.	DATE.
425,388	Odell, J. B	Locomotion	Apr. 8, 1890
425,413	Etheridge, H	Telegraphy, automatic	Apr. 15, 1890
425,435	LaRoche, F. A	Magneto-electric	Apr. 15, 1890
425,466	Stevens, W. F	Telegraphy, railway-car	Apr. 15, 1890
425,470	Thomson, E	Systems of distribution	Apr. 15, 1890
425,488	Blackwell, F. O	Locomotion	Apr. 15, 1890
425,489	Blackwell, F. O	do	Apr. 15, 1890
425,493	Cleveland, W. B	do	Apr. 15, 1890
425,507	Hamilton, C. J	Cut-outs, mechanical	Apr. 15, 1890
425,511	Jones, F. W	Telegraphy, keys	Apr. 15, 1890
425,513	Kookogey, W. P	Insulators	Apr. 15, 1890
425,568	Edelkamp, J.	Batteries, thermal	Apr. 15, 1890
425,570	Griggs, A. C	Alarms	Apr. 15, 1890
425,572	Hofheimer, M.	Apparel, cutting	Apr. 15, 1890
425,576	Martin, M.	Telegraphy, fire	Apr. 15, 1890
425,579	Popp, V.	Meters	Apr. 15, 1890
425,588	Thomson, E. and Rice, E. W., jr.	Lights, sockets and keys	Apr. 15, 1890
425,594	Currier, J. B.	Telephones, calls	Apr. 15, 1890
425,597	Delany, P. B.	Telegraphy, relays and sounders	Apr. 15, 1890
425,615	Knudson, A. A.	Insulating materials	Apr. 15, 1890
425,625	Parker, E. A	Thermostats	Apr. 15, 1890
425,627	Peckham, E.	Locomotion	Apr. 15, 1890
425,630	Rice, D. H.	Telephones, calls	Apr. 15, 1890
425,631	Rice, D. H.	do	Apr. 15, 1890
425,640	Thomson, E.	Locomotion	Apr. 15, 1890
425,694	Porter, W. and George, H.	do	Apr. 15, 1890
425,720	Wheeler, F. C	do	Apr. 15, 1890
425,726	Batchelor, C.	Cut-outs, electro-magnetic	Apr. 15, 1890
425,741	Bradley, J. J	Lights, sockets and keys	Apr. 15, 1890
425,757	Dewey, M. W.	Heaters	Apr. 15, 1890
425,760	Edison, T. A.	Meters	Apr. 15, 1890
425,761	Edison, T. A.	Lights, incandescent	Apr. 15, 1890
425,762	Edison, T. A.	Cut-outs, thermal	Apr. 15, 1890
425,763	Edison, T. A.	Magneto-electric	Apr. 15, 1890
425,767	Evans, T. A.	Locomotion	Apr. 15, 1890
425,768	Ezell, F.	Dishes and plates	Apr. 15, 1890
425,777	Godfrey, W. L.	Magnetic locks and bolts	Apr. 15, 1890
425,801	Johnson, F.	Lighting, systems	Apr. 15, 1890
425,818	McLaughlin, J. F.	Batteries, secondary	Apr. 15, 1890
425,819	McLaughlin, J. F.	do	Apr. 15, 1890
425,853	Berne, A. W.	Telephones, systems	Apr. 15, 1890
425,862	Carty, J. J	do	Apr. 15, 1890
425,863	Carty, J. J	do	Apr. 15, 1890
425,866	Dewey, M. W.	Locomotion	Apr. 15, 1890
425,883	Hunter, R. M.	do	Apr. 15, 1890
425,902	Philippart, G.	Batteries, secondary	Apr. 15, 1890
425,903	Porter, W. H.	Incrustation	Apr. 15, 1890
425,911	Sill, R. V. R.	Locomotion	Apr. 15, 1890
425,912	Sill, R. V. R.	do	Apr. 15, 1890
425,913	Smith, A. J.	Conductors, underground	Apr. 15, 1890
425,917	Tortora, E.	Conductors	Apr. 15, 1890
425,923	Zipernowsky, C., Déri, M. and Bláthy, O. T.	Motors, alternating	Apr. 15, 1890
425,929	Bruckner, C. C. and Baleck, S. W.	Engraving	Apr. 15, 1890
425,950	Knight, W. H.	Locomotion	Apr. 15, 1890
425,957	Philippart, G.	Batteries, secondary	Apr. 15, 1890
425,959	Renard, L. M. J. C. C.	Batteries, galvanic	Apr. 15, 1890
425,961	Seubel, P.	Conductors, underground	Apr. 15, 1890
425,963	Warner, E. P.	Telephones, switches	Apr. 15, 1890
425,964	Weems, D. G.	Locomotion	Apr. 15, 1890
425,965	Weems, D. G.	Railways, rails	Apr. 15, 1890
425,966	Weems, D. G.	Locomotion	Apr. 15, 1890
425,990	Davis, F. E. and Scott, J., jr.	Covering cord	Apr. 22, 1890
425,991	Davis, F. E. and Scott, J., jr.	Motors	Apr. 22, 1890
425,995	Diehl, P.	do	Apr. 22, 1890
425,999	Epstein, L.	Batteries, secondary	Apr. 22, 1890
426,009	Hadlock, W. E.	Indicators	Apr. 22, 1890
426,024	Von der Kammer, J.	Cut-outs, thermal	Apr. 22, 1890
426,049	Norton, J. P.	Cut-outs, mechanical	Apr. 22, 1890
426,055	Packard, J. W.	Lights, incandescent	Apr. 22, 1890
426,057	Patterson, T.	Cut-outs, thermal	Apr. 22, 1890
426,064	Rae, F. B.	Locomotion	Apr. 22, 1890
426,065	Rae, F. B.	Galvanometers	Apr. 22, 1890
426,066	Rae, F. B.	Locomotion	Apr. 22, 1890
426,082	Thomson, E.	Cut-outs, thermal	Apr. 22, 1890
426,102	Blackwell, F. O.	Locomotion	Apr. 22, 1890
426,108	Clark, E. P.	Regulators	Apr. 22, 1890
426,109	Clark, E. P.	do	Apr. 22, 1890

No.	NAME.	CLASS.	DATE.
426,110	Clark, E. P.	Regulators	Apr. 22, 1890
426,121	Gennert, E. F.	Lights, incandescent, special features	Apr. 22, 1890
426,127	Kintner, C. J.	Systems of distribution	Apr. 22, 1890
426,134	Miller, J. J.	Annunciators	Apr. 22, 1890
426,153	Wageimann, E.	Inductariums, transformers, stationary	Apr. 22, 1890
426,155	Warner, E. P.	Street lamps	Apr. 22, 1890
426,156	Warrell, F. G.	Cut outs, thermal	Apr. 22, 1890
426,189	Klein, P. H., jr.	Lights, incandescent, special features	Apr. 22, 1890
426,196	Munsie, J. F.	Conductors, underground	Apr. 22, 1890
426,197	Munsie, J. F.	do	Apr. 22, 1890
426,198	Munsie, J. F.	do	Apr. 22, 1890
426,199	Munsie, J. F.	do	Apr. 22, 1890
426,200	Munsie, J. F.	Connectors	Apr. 22, 1890
426,201	Munsie, J. F.	Conductors, underground	Apr. 22, 1890
426,202	Munsie, J. F.	Insulating materials	Apr. 22, 1890
426,203	Munsie, J. F.	Insulators	Apr. 22, 1890
426,204	Munsie, J. F.	Connectors	Apr. 22, 1890
426,205	Munsie, J. F.	Conductors, underground	Apr. 22, 1890
426,206	Munsie, J. F.	do	Apr. 22, 1890
426,222	Tower, G. A.	Railway signals	Apr. 22, 1890
426,247	Delany, P. B.	Telegraphy, relays and sounders	Apr. 22, 1890
426,266	Gray, W.	Telephones, systems	Apr. 22, 1890
426,269	Gutmann, L.	Locomotion	Apr. 22, 1890
426,304	McMahon, J. P.	Telegraphy, fire, alarms and extinguishers	Apr. 22, 1890
426,307	Paca, W. S.	Annunciators	Apr. 22, 1890
426,335	Shallenberger, O. B.	Meters	Apr. 22, 1890
426,338	Spear, A. D.	Telegraphy, lightning arresters	Apr. 22, 1890
426,343	Watson, J. A.	Magneto-electric	Apr. 22, 1890
426,348	Wightman, M. J. and Thomson, E.	do	Apr. 22, 1890
426,379	Henry, J. C.	Locomotion	Apr. 22, 1890
426,380	Henry, J. C.	Motors	Apr. 22, 1890
426,381	Hinds, C. H.	Igniting devices, manual	Apr. 22, 1890
426,382	Hunter, R. M.	Locomotion	Apr. 22, 1890
426,384	Jasper, W.	Velocipedes	Apr. 22, 1890
426,395	Rudd, C. H.	Railway signals	Apr. 22, 1890
426,405	Wood, J. J.	Lights, arc, gravity feed, gear-clutch	Apr. 22, 1890
426,436	Corliss, G. F.	Locomotion	Apr. 29, 1890
426,437	Drew, C. W. and Francis, E. R.	Heaters	Apr. 29, 1890
426,452	Kuehule, J.	Locomotion	Apr. 29, 1890
426,471	Rice, E. W., jr.	Magneto-electric	Apr. 29, 1890
426,479	Tremaine, H. A.	Lights, filaments and carbons	Apr. 29, 1890
426,499	Hicks, T. H.	Galvanometers	Apr. 29, 1890
426,522	Burton, G. D.	Telegraphy, railway-car	Apr. 29, 1890
426,554	Wilson, J. C.	Recorders	Apr. 29, 1890
426,555	Wilson, J. C.	Morse registers	Apr. 29, 1890
426,563	Frankenberg, A. M.	Induction coils	Apr. 29, 1890
426,570	Peel, W. T.	Regulators	Apr. 29, 1890
426,573	Stanley, W., jr.	do	Apr. 29, 1890
426,574	Stanley, W., jr.	do	Apr. 29, 1890
426,576	Wenström, J.	Magneto-electric	Apr. 29, 1890
426,580	Bentley, E. M.	Locomotion	Apr. 29, 1890
426,583	Davis, M. M.	Telegraphy, circuits and systems	Apr. 29, 1890
426,591	Jones, F. W.	Telegraphy, quadruplex	Apr. 29, 1890
426,621	Mackenzie, J. U.	Telegraphy, fire	Apr. 29, 1890
426,650	Thompson, R. W.	Locomotion	Apr. 29, 1890
426,657	Brill, J. A.	do	Apr. 29, 1890
426,658	Brill, J. A.	do	Apr. 29, 1890
426,660	Carroll, W.	Lamp posts	Apr. 29, 1890
426,688	Shaffer, C. H.	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
426,691	Speicher, J. and Fearey, F. T.	Telegraphy, fire	Apr. 29, 1890
426,699	Wood, J. J.	Regulators	Apr. 29, 1890
426,705	Blewkey, W. M.	Alarms, burglar	Apr. 29, 1890
426,706	Bleoo, J. H.	do	Apr. 29, 1890
426,708	Brill, J. A.	Locomotion	Apr. 29, 1890
426,724	Heyl, G. E.	Batteries, secondary	Apr. 29, 1890
426,749	Anderson, F.	Telegraphy, automatic	Apr. 29, 1890
426,778	Dalton, J.	Drop-lights and hangers	Apr. 29, 1890
426,781	Dewey, M. W.	Heaters	Apr. 29, 1890
426,788	Farmer, M. G.	Electro-deposition	Apr. 29, 1890
426,789	Farmer, M. G.	do	Apr. 29, 1890
426,819	Jones, F. W.	Telegraphy, quadruplex	Apr. 29, 1890
426,832	Madden, J.	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
426,917	Chambers, W. H.	do	Apr. 29, 1890
426,932	Gendron, F.	Batteries, galvanic	Apr. 29, 1890
426,941	Kleber, O.	Telegraphy, keys	Apr. 29, 1890
426,971	Firmann, H.	Projectiles, blasting and fuses	Apr. 29, 1890
426,989	Cutler, J. L.	Telephones, calls	Apr. 29, 1890

No.	NAME.	CLASS.	DATE.
426,992	Garver, M. M	Galvanometers	Apr. 29, 1890
427,014	Roberts, E. F	Indicators	Apr. 29, 1890
427,022	Weston, E	Galvanometers	Apr. 29, 1890
427,024	Whitaker, H. B	Cut-outs, mechanical	Apr. 29, 1890
427,032	Bain, F	Rheostats	May 6, 1890
427,039	Brooks, D., jr	Conductors, underground	May 6, 1890
427,042	Burton, G. D	Telegraphy, railway-car	May 6, 1890
427,062	Erickson, E. E	Lights, incandescent, special features	May 6, 1890
427,070	Gibbs, W. E	Dental instruments	May 6, 1890
427,087	Kellogg, M. G	Telephones, systems	May 6, 1890
427,120	Scribner, C. E	do	May 6, 1890
427,121	Scribner, C. E	do	May 6, 1890
427,122	Scribner, C. E	Magneto-electric, hand-machines	May 6, 1890
427,123	Scribner, C. E	Telephones, systems	May 6, 1890
427,138	Wamsley, W. F. and McIntosh, T.	Connectors	May 6, 1890
427,151	Burton, G. D	Heaters	May 6, 1890
427,154	Carty, J. J	Telephones, systems	May 6, 1890
427,155	Carty, J. J	do	May 6, 1890
427,156	Carty, J. J	do	May 6, 1890
427,163	Elkins, W. H	Regulators	May 6, 1890
427,164	Elkins, W. H	do	May 6, 1890
427,194	Scribner, C. E	Telephones, systems	May 6, 1890
427,195	Seymour, A. P	Lights, arc, special features	May 6, 1890
427,204	Stut, J. C. H	Telephones, electric	May 6, 1890
427,208	Waters, B. E	Telephones, systems	May 6, 1890
427,221	Boynton, E. M	Locomotion	May 6, 1890
427,235	Ingraham, A. A	Motors	May 6, 1890
427,237	Kissell, A. S	Cut-outs, electro-magnetic	May 6, 1890
427,259	Forbes, G	Magneto-electric	May 6, 1890
427,294	Brace, De W. B	do	May 6, 1890
427,296	Busby, J. F	Insulators	May 6, 1890
427,333	Lewis, W. F	Locomotion	May 6, 1890
427,341	Meyers, H. J	Magnetic locks and bolts	May 6, 1890
427,337	Winton, H. D	Railway signals	May 6, 1890
427,405	Dewey, M	Magneto-electric	May 6, 1890
427,429	Koyle, C. H. and Lattig, J. W	Railway signals	May 6, 1890
427,430	Koyle, C. H. and Lattig, J. W	do	May 6, 1890
427,445	Sprague, G	Conductors, underground	May 6, 1890
427,459	Chamberlain, J. C.	Locomotion	May 6, 1890
427,468	Dow, A	Medical and surgical, body-wear	May 6, 1890
427,480	Paine, A. T	Nautical signals	May 6, 1890
427,489	Westinghouse, G., jr	Meters	May 6, 1890
427,503	Duncan, L	Motors	May 6, 1890
427,513	Hollingshead, W. B	Electro-deposition	May 6, 1890
427,514	Holmes, A. B. and Gale, G. F	Lights, sockets and keys	May 6, 1890
427,515	Hunter, R. M	Systems of distribution	May 6, 1890
427,521	Platt, O. S. and Orford, J. M	Cut-outs, mechanical	May 6, 1890
427,522	Platt, O. S. and Orford, J. M	do	May 6, 1890
427,523	Platt, O. S. and Orford, J. M	do	May 6, 1890
427,530	Warner, E. P	Regulators	May 6, 1890
427,540	Bell, L	Telegraphy, lightning arresters	May 13, 1890
427,541	Bell, L	Railways, systems, circuits, multiple arc	May 13, 1890
427,548	Brush, C. F	Cut-outs, thermal	May 13, 1890
427,549	Burton, J. M	Applications, tools and machines	May 13, 1890
427,569	Harriman, W. F	Locomotion	May 13, 1890
427,571	Heymann, E. and F. W	Regulators, alternating	May 13, 1890
427,574	Howard, B. C	Heaters	May 13, 1890
427,589	Marks, H. A	Locomotion	May 13, 1890
427,606	Patten, F. J	Electro-magnets	May 13, 1890
427,621	Scribner, C. E	Telephones, systems	May 13, 1890
427,622	Scribner, C. E	Telephones, switch-boards	May 13, 1890
427,623	Scribner, C. E	Telephones, systems	May 13, 1890
427,624	Scribner, C. E	do	May 13, 1890
427,628	Short, S. H	Railways, systems, overhead, trolleys	May 13, 1890
427,674	Daft, L	Magneto-electric	May 13, 1890
427,680	Goodson, G. A	Type-writing	May 13, 1890
427,681	Goodson, G. A	Printing, matrix-making	May 13, 1890
427,710	Smith, W. F	Batteries, secondary	May 13, 1890
427,711	Spike, C. J. and McLeod, H. V	Telegraphy, fire	May 13, 1890
427,724	Bentley, E. M	Cut-outs, electro-magnetic	May 13, 1890
427,725	Bentley, E. M	Locomotion	May 13, 1890
427,726	Bentley, E. M	do	May 13, 1890
427,742	Carty, J. J	Telephones, systems	May 13, 1890
427,746	Cordley, W. J	Railways, systems, closed conduit	May 13, 1890
427,748	Currie, S. C. C	Meters	May 13, 1890
427,749	Currie, S. C. C	do	May 13, 1890
427,751	De Ferranti, S. Z	Inductoriums, transformers, stationary	May 13, 1890

No.	NAME.	CLASS.	DATE.
427,762	Haas, J., jr.	Railway signals	May 13, 1890
427,783	Morgan, F. E. and Lane, F. A.	do	May 13, 1890
427,785	McLaughlin, J. F.	Batteries, secondary	May 13, 1890
427,789	Nevins, T. F.	do	May 13, 1890
427,823	Anthony, W. A.	Cut-outs, thermal	May 13, 1890
427,873	Jones, J. W.	Alarms	May 13, 1890
427,876	Kaylor, J. S.	Telegraphy, keys	May 13, 1890
427,878	Kilian, C. J.	Conductor supports and insulators	May 13, 1890
427,879	Lane, F. A.	Annunciators	May 13, 1890
427,917	Scribner, C. E.	Telephones, systems	May 13, 1890
427,928	Stellman, J. L.	Steam boilers, coverings	May 13, 1890
427,951	Atterbury, T. B.	Lamp-shades	May 13, 1890
427,953	De Baillehache, E. J. J.	Railway signals	May 13, 1890
427,966	Brill, G. M. and J. A.	Railway cars, trucks	May 13, 1890
427,971	Coffin, L. L.	Heaters	May 13, 1890
427,974	Cro-slev, L. J., Emmott, W. and Harrison, J. F.	Telephones, systems	May 13, 1890
427,978	Von Dolivo-Dobrowolsky, M.	Motors, alternating	May 13, 1890
427,984	Griffin, C. M.	Telegraphy, lightning arresters	May 13, 1890
427,986	Gwynn, J. W.	Street lamps	May 13, 1890
428,008	Lange, P.	Lights, arc, gravity feed, gear-clutch	May 13, 1890
428,026	Taylor, F. C. and Hurd, J. R.	Fulling	May 13, 1890
428,030	Wolstencroft, J. and Soley, W. H.	Fire-arms, ball traps	May 13, 1890
428,038	Bowen, E. H.	Magneto-electric	May 13, 1890
428,041	Conly, M. S.	Railway signals	May 13, 1890
428,042	Conly, M. S.	Applications, general	May 13, 1890
428,046	Hanagin, J. A.	Connectors	May 13, 1890
428,050	Macloskie, C. H.	Lighting, systems	May 13, 1890
428,055	Patterson, W. R.	Conductors, lead-covered	May 13, 1890
428,057	Tesla, N.	Pyro-magneto electric devices	May 13, 1890
428,066	Breese, C. P.	Lights, arc, positive feed, clutch	May 20, 1890
428,071	Brown, H. P.	Locomotion	May 20, 1890
428,072	Brown, H. P.	do	May 20, 1890
428,073	Brown, L. V.	Magneto-electric	May 20, 1890
428,075	Church, B. S.	Recorders	May 20, 1890
428,084	Frazer, A.	Meters	May 20, 1890
428,087	Garrett, D.	Electro-deposition	May 20, 1890
428,095	Hart, O. W.	Annunciators	May 20, 1890
428,098	Hunter, R. M.	Locomotion	May 20, 1890
428,116	MacDonald, A. J.	Batteries, galvanic	May 20, 1890
428,123	Morrison, D. B.	Wire fences	May 20, 1890
428,136	Rae, F. B.	Locomotion	May 20, 1890
428,145	Ruttan, H. W.	Girders and columns	May 20, 1890
428,169	Knight, W. H.	Motors	May 20, 1890
428,174	Ludwig, J. C.	Telephones, magnetic	May 20, 1890
428,175	McLaughlin, J. F.	Locomotion	May 20, 1890
428,189	Warner, E. P.	Telephones, systems	May 20, 1890
428,201	Davis, F. E. and Scott, J.	Covering cord	May 20, 1890
428,210	Hunter, R. M.	Electric locomotives	May 20, 1890
428,211	Hunter, R. M.	do	May 20, 1890
428,221	Patten, F. J.	Telegraphy, multiplex	May 20, 1890
428,222	Patten, F. J.	do	May 20, 1890
428,223	Patten, F. J.	do	May 20, 1890
428,224	Patten, F. J.	do	May 20, 1890
428,225	Patten, F. J.	do	May 20, 1890
428,226	Patten, F. J.	do	May 20, 1890
428,247	Fenner, W. W.	Magnetic locks and bolts	May 20, 1890
428,256	Schneider, J.	do	May 20, 1890
428,280	Mehren, J. F.	Meters	May 20, 1890
428,289	Schmid, A.	Magneto-electric	May 20, 1890
428,290	Von Siemens, E. W.	Meters	May 20, 1890
428,317	Pfannkuche, G.	Regulators	May 20, 1890
428,358	Stevens, N. P.	Lights, arc, special features	May 20, 1890
428,378	Colby, E. A.	Reducing and separating apparatus	May 20, 1890
428,379	Colby, E. A.	do	May 20, 1890
428,380	Croasdale, E.	Magneto-electric	May 20, 1890
428,420	Scott, A. I.	Medical and surgical, body-wear	May 20, 1890
428,427	Story, R. J. and J. T., Fox, A. E. and Hill, G. J.	Indicators	May 20, 1890
428,433	Walton, R. T.	Igniting devices, manual	May 20, 1890
428,435	Westinghouse, G., jr.	Lights, filaments and carbons	May 20, 1890
428,443	Ashbaugh, J. I.	Heaters	May 20, 1890
428,454	Chapman, W. H.	Motors	May 20, 1890
428,459	Coffin, C. L.	Heaters	May 20, 1890
428,481	Groswith, H.	Motors	May 20, 1890
428,482	Guss, O. G.	Alarms	May 20, 1890
428,499	Legg, J. B. and Nile, J.	Locomotion	May 20, 1890
428,540	Williams, R. E.	Medical and surgical, body-wear	May 20, 1890
428,545	Andrews, E.	Insulators	May 20, 1890

No.	NAME.	CLASS.	DATE.
428,552	Colby, E. A	Reducing and separating	May 20, 1890
428,562	Houck, T. J	Telegraphy, railway-car	May 20, 1890
428,564	Jenks, W. J	Cut-outs, thermal	May 20, 1890
428,574	Stanley, W., jr	Induction coils	May 20, 1890
428,575	Stanley, W., jr	Inductariums, transformers, stationary	May 20, 1890
428,576	Stitzel, F. and Weinedel C.	Automatic signal-setting apparatus	May 20, 1890
428,583	Egan, C. E. and Gray, H. F	Time checks	May 20, 1890
428,586	Alton, G. H	Cut-outs, mechanical	May 27, 1890
428,604	Heisler, C	Lights, filaments and carbons	May 27, 1890
428,616	Lemp, H	Heaters	May 27, 1890
428,617	Lemp, H	do	May 27, 1890
428,618	Lemp, H	Inductariums, transformers, stationary	May 27, 1890
428,619	Lemp, H	Heaters	May 27, 1890
428,620	Lemp, H. and Moody, N. S	Regulators, alternating	May 27, 1890
428,633	Rice, E. W., jr	Meters	May 27, 1890
428,647	Thomson, E	Systems of distribution	May 27, 1890
428,648	Thomson, E	Inductariums, transformers, stationary	May 27, 1890
428,649	Thomson, E	Meters	May 27, 1890
428,650	Thomson, E	Motors, alternating	May 27, 1890
428,651	Thomson, E	Systems of distribution	May 27, 1890
428,652	Thomson, E. and Alton, G. H	Lights, sockets and keys	May 27, 1890
428,653	Thomson, E	Telegraphy, lightning arresters	May 27, 1890
428,669	Dummer, E	Electric locomotives	May 27, 1890
428,676	Karr, H. C	Clocks, electric	May 27, 1890
428,684	Mason, J. H	Batteries, galvanic	May 27, 1890
428,688	Morehead, J.	Alarms	May 27, 1890
428,698	Scribner, C. E	Telephones, systems	May 27, 1890
428,704	Thomson, E	Cut-outs, mechanical	May 27, 1890
428,705	Thomson, E	Regulators	May 27, 1890
428,723	Jeffers, C. L	Drop-lights and hangers	May 27, 1890
428,732	Sprague, F. J	Regulators	May 27, 1890
428,735	Weller, F. A	Magneto-electric	May 27, 1890
428,742	Brush, C. F	do	May 27, 1890
428,743	Brush, C. F	do	May 27, 1890
428,745	Candee, W. L	Conductors, lead-covered	May 27, 1890
428,746	Colgate, A. E	Galvanometers	May 27, 1890
428,748	Fike, D. M. and Huffman, J	Railway signals	May 27, 1890
428,750	Glass, L. and Arnold, W. S	Vending apparatus	May 27, 1890
428,751	Glass, L. and Arnold, W. S	do	May 27, 1890
428,770	Field, C. H	Engraving machines	May 27, 1890
428,772	Goldschmidt, P	Cordage, warping	May 27, 1890
428,774	Hayward, E. and Sims, E. S	Alarms, burglar	May 27, 1890
428,781	Nowotny, J. S	Batteries, galvanic	May 27, 1890
428,782	Potter, S. M. and Morgan, H. E	Motors	May 27, 1890
428,810	Garsed, R. P	Annunciators	May 27, 1890
428,828	Cassard, H. L	Vending apparatus	May 27, 1890
428,854	McCuskey, J. L	Time-alarms	May 27, 1890
428,888	Burt, E. M	Batteries, galvanic	May 27, 1890
428,900	Ehrlich, L	Indicators	May 27, 1890
428,917	Ingraham, A. A	Electric locomotives	May 27, 1890
428,929	Morris, E. P	Drop-lights and hangers	May 27, 1890
428,930	Morris, E. P	Conductors, supports and insulators	May 27, 1890
428,934	McLaughlin, J. F	Cut-outs, mechanical	May 27, 1890
428,935	McLaughlin, J. F	Cut-outs, electro-magnetic	May 27, 1890
428,942	Pawlowski, J	Lights, arc, special features	May 27, 1890
428,970	Stitzel, F	Railway signals	May 27, 1890
428,979	Watson, G. B.	Insulators	May 27, 1890
428,989	Wilson, W. H	Lamp shades	May 27, 1890
429,012	Carpenter, C. F	Applications, tools and machines	May 27, 1890
429,030	Greenfell, H. H	Fire-arms, sights	May 27, 1890
429,033	Ide, F. F	Applications, general	May 27, 1890
429,049	McLaughlin, J. F	Metal working, miscellaneous	May 27, 1890
429,058	Pierce, H. I	Conductors, supports and insulators	May 27, 1890
429,067	Simmmons, C. H	Bridges, girders and columns	May 27, 1890
429,068	Sommerville, A. R	Electrodes	May 27, 1890
429,074	Webb, F. W. and Thompson, A. M	Railway signals	May 27, 1890
429,093	Hunter, R. M	Railways, systems, overhead	May 27, 1890
429,094	Hunter, R. M	Motors, alternating	May 27, 1890
429,104	Withaus, E. L	Conductors, underground	May 27, 1890
429,107	Allen, R. N	Electric locomotives	June 3, 1890
429,109	Anderson, F	Motors, alternating	June 3, 1890
429,113	Brown, B. F	Railways, systems, overhead, trolleys	June 3, 1890
429,115	Barry, J	Telegraphy, printing	June 3, 1890
429,125	Ginochio, N. B	Telephones, magnetic	June 3, 1890
429,133	Kammeyer, C. E	Cut-outs, thermal	June 3, 1890
429,172	Irwin, J. H	Lights, incandescent	June 3, 1890
429,189	Cushing, J. P	Indicators	June 3, 1890

No.	NAME.	CLASS.	DATE.
429,199	Macquesten, W. D	Railways, systems, overhead	June 3, 1890
429,233	Dickerson, E. N., jr	Telegraphy, multiplex	June 3, 1890
429,251	Stafford, J	Conductors, underground	June 3, 1890
429,255	Bishop, J. D	Conductors, lead-covered	June 3, 1890
429,272	Hering, C	Batteries, secondary	June 3, 1890
429,273	Hering, C	do	June 3, 1890
429,274	Hering, C	do	June 3, 1890
429,277	Lineff, A. L	Locomotion	June 3, 1890
429,286	Rosenfield, W. W	Alarms	June 3, 1890
429,304	Cobb, H. B.	Conductors	June 3, 1890
429,305	Cobb, H. B.	do	June 3, 1890
429,306	Cobb, H. B.	do	June 3, 1890
429,307	Cobb, H. B.	Conductors, underground	June 3, 1890
429,314	Macquesten, W. D	Electric locomotives	June 3, 1890
429,315	Macquesten, W. D	Supports and insulators	June 3, 1890
429,316	Macquesten, W. D	do	June 3, 1890
429,318	Ongley, C. E	Telegraphy, fire, alarms and extinguishers	June 3, 1890
429,327	Sprague, F. J	Electric locomotives	June 3, 1890
429,330	Wilkins, T. M. and Reid, A. H	Voting machines	June 3, 1890
429,333	Bradford, J. M	Regulators	June 3, 1890
429,359	McLaughlin, J. F	Type-writing	June 3, 1890
429,360	McLaughlin, J. F	Time checks	June 3, 1890
429,377	English, S. M	Telegraphy, circuits and systems	June 3, 1890
429,386	Parrish, M. W	Electrolysis	June 3, 1890
429,396	Ward, C. A	Clocks, electric	June 3, 1890
429,413	Blauvelt, W. S	Railways, systems, overhead, trolleys	June 3, 1890
429,447	Hoeneman, F. P. and W. A	Batteries, galvanic	June 3, 1890
429,478	Ramsey, J., jr., and Weir, F. C	Railway signals	June 3, 1890
429,483	Rudd, C. H	do	June 3, 1890
429,490	Wagemann, E	Magneto-electric	June 3, 1890
429,534	De Khotinsky, A	Lights, filaments and carbons	June 3, 1890
429,535	De Khotinsky, A	do	June 3, 1890
429,559	Carpenter, C. E	Heaters	June 3, 1890
429,560	Carpenter, C. E	do	June 3, 1890
429,561	Carpenter, C. E	do	June 3, 1890
429,562	Carpenter, C. E	do	June 3, 1890
429,573	Keller, C. L	Lights, arc, gravity feed, gear-clutch	June 3, 1890
429,576	McCoy, A. T	Telegraphy, printing	June 3, 1890
429,577	McCoy, A. T	do	June 3, 1890
429,582	Parrish, H. A	Railway signals	June 3, 1890
429,583	Pfannkuche, G	Inductoriums, transformers, stationary	June 3, 1890
429,584	Possons, N. S	Cut-outs, thermal	June 3, 1890
429,594	Bartlett, W. A	Air and spring guns	June 10, 1890
429,596	Beattie, J., jr	Batteries, galvanic	June 10, 1890
429,599	Bishop, J. D	Annunciators	June 10, 1890
429,608	Dyer, R. N	Lights, incandescent	June 10, 1890
429,675	Burt, M. C	Oil gas	June 10, 1890
429,687	Hunter, R. M	Locomotives	June 10, 1890
429,703	Silico, J., jr	Batteries, galvanic	June 10, 1890
429,705	Steffens, M. J	Photography, cameras	June 10, 1890
429,727	Lodge, O. J	Telegraphy, lightning arresters	June 10, 1890
429,729	Marvin, H. N	Transmission of power	June 10, 1890
429,730	Marvin, H. N	do	June 10, 1890
429,731	Marvin, H. N	do	June 10, 1890
429,732	Marvin, H. N	do	June 10, 1890
429,735	Patten, F. J	Telegraphy, multiplex	June 10, 1890
429,736	Pfund, R	Magneto-electric	June 10, 1890
429,742	Redfield, C. L	Printing, matrix-making	June 10, 1890
429,745	Van Depoele, C. J	Connectors	June 10, 1890
429,746	Van Depoele, C. J	Electric locomotives	June 10, 1890
429,747	Van Depoele, C. J	Railways, systems, telpher	June 10, 1890
429,751	Barnard, J. H	Meters	June 10, 1890
429,787	Coerper, C	Lights, arc, gravity feed, gear-clutch	June 10, 1890
429,801	Voegel, W	Telephones, magnetic	June 10, 1890
429,815	Reilly, J. C	Conductors	June 10, 1890
429,817	Shubert, H. C	Alarms, burglar	June 10, 1890
429,825	Wagemann, E	Regulators	June 10, 1890
429,844	Culver, J. P	Drain tiles	June 10, 1890
429,887	Colgate, A. E	Galvanometers	June 10, 1890
429,895	Felt, G. H	Batteries, galvanic	June 10, 1890
429,896	Felt, G. H	do	June 10, 1890
429,897	Felt, G. H	do	June 10, 1890
429,898	Felt, G. H	do	June 10, 1890
429,899	Firman, L. B	Railway signals	June 10, 1890
429,912	Hering, C	Batteries, secondary	June 10, 1890
429,913	Hering, C	do	June 10, 1890
429,914	Hering, C	do	June 10, 1890

No.	NAME.	CLASS.	DATE.
429,981	Van Depoele, C. J	Railways, systems, circuits, multiple arc	June 10, 1890
429,982	Watterhouse, E. R	Telegraphy, keys	June 10, 1890
430,010	Flad, H	Conductors, underground	June 10, 1890
430,025	Hunter, R. M	Railways, systems, conduits	June 10, 1890
430,054	Andersen, J. M	Cut-outs, mechanical	June 10, 1890
430,058	Ball, C. M. and Norton, S	Separators	June 10, 1890
430,060	Bentley, E. M	Systems of distribution	June 10, 1890
430,065	Case, J. D. and Evans, C. W	Music, electric actions	June 10, 1890
430,066	Case, J. D. and Evans, C. W	do	June 10, 1890
430,075	Hitchcock, C. A	Batteries, galvanic	June 10, 1890
430,076	Hunter, R. M	Railways, systems, circuits, multiple arc	June 10, 1890
430,094	Spencer, A. D	Metal working, tools and implements	June 10, 1890
430,096	Waddell, M	Cut-outs, electro-magnetic	June 10, 1890
11,083	Knight, W. H	Railways, systems, circuits, multiple arc	June 10, 1890
11,084	Knight, W. H	Railways, systems, conduit	June 10, 1890
430,128	Irwin, J. H	Telephones, electric	June 17, 1890
430,147	Pfugst, L	Electric locomotives	June 17, 1890
430,156	Voelker, W. L	Lights, incandescent	June 17, 1890
430,175	Crockett, C. H. and Allen, C. C	Telegraphy, fire	June 17, 1890
430,208	Hunter, R. M	Railways, systems, circuits, multiple arc	June 17, 1890
430,252	Norton, J. A	Cut-outs, mechanical	June 17, 1890
430,260	Alcock, A. U. and Galopiu, H	Lights, arc, gravity feed, clutch	June 17, 1890
430,263	Bentley, E. M	Railway signals	June 17, 1890
430,275	Edison, T. A	Separators	June 17, 1890
430,279	Edison, T. A	Batteries, galvanic	June 17, 1890
430,280	Edison, T. A	Separators	June 17, 1890
430,296	Oakman, S	Insulators	June 17, 1890
430,297	Patterson, W. R	Conductors, underground	June 17, 1890
430,310	Eisenhuth, J. W	Air and gas engines, explosive	June 17, 1890
430,312	Eisenhuth, J. W	do	June 17, 1890
430,320	Rice, E. W., jr	Magneto-electric, couplings	June 17, 1890
430,326	Thomson, E. and Rice, E. W., jr	Cut-outs, electro-magnetic	June 17, 1890
430,327	Thomson, E. and Rice, E. W., jr	Regulators	June 17, 1890
430,328	Thomson, E. and Rice, E. W., jr	Motors, alternating	June 17, 1890
430,329	Wightman, M. J	Railways, systems, multiple arc	June 17, 1890
430,357	Thomson, E	Lights, arc, positive feed	June 17, 1890
430,373	Brochigans, S	Alarms, burglar	June 17, 1890
430,387	Kennedy, J. C	Applications, general	June 17, 1890
430,432	Oulton, J. and Edmondson, J	Meters	June 17, 1890
430,437	Rockwell, F. C	Lights, incandescent, special features	June 17, 1890
430,453	Willson, T. L	Electrolysis	June 17, 1890
430,461	Bull, W. B	Incineration	June 17, 1890
430,462	Bull, W. B	do	June 17, 1890
430,463	Baerenz, J. J	Vending apparatus	June 17, 1890
430,485	Rockwell, F. C	Lights, sockets and keys	June 17, 1890
430,486	Rose, H. J. F	Wash boilers	June 17, 1890
430,487	Sholder, L. H	Lamps and gas fittings, candlesticks	June 17, 1890
430,504	Barrett, M. M. and Daly, J. F	Air and gas engines, explosive	June 17, 1890
430,505	Barrett, M. M. and Daly, J. F	do	June 17, 1890
430,506	Barrett, M. M. and Daly, J. F	do	June 17, 1890
430,515	Devore, D. B	Railways, systems, conduit	June 17, 1890
430,551	Wade, G. H	Meters	June 17, 1890
430,569	Dowst, S. M. and Hosmer, F. H	Telephones, systems	June 17, 1890
430,580	Hunter, R. M	Railways, systems, overhead, trolleys	June 17, 1890
430,606	Alexander, W. W	Electro-magnets	June 24, 1890
430,607	Alexander, W. W	Telephones, calls	June 24, 1890
430,608	Alexander, W. W	do	June 24, 1890
430,622	Chase, J	Lights, arc, special features	June 24, 1890
430,633	Easton, L. F	Thermostats	June 24, 1890
430,634	Elkins, W. H	Regulators	June 24, 1890
430,636	Gill, E. R., jr	Telephones, calls	June 24, 1890
430,637	Gill, E. R., jr	Railway signals	June 24, 1890
430,645	Heath, J	Lights, incandescent, special features	June 24, 1890
430,675	Nelson, D. C. and Eaton, W. R	Railways, systems, overhead, trolleys	June 24, 1890
430,686	Rae, F. B	Electric locomotives	June 24, 1890
430,688	Richards, W. S	Systems of distribution	June 24, 1890
430,690	Robinson, W	Conductors, supports and insulators	June 24, 1890
430,696	Seaman, W. H	Conductors, insulators	June 24, 1890
430,722	Word, J. J	Lights, arc, positive feed, gear-clutch	June 24, 1890
430,735	Garsed, R. P	Annunciators	June 24, 1890
430,747	O'Connell, J. J	Telephones, systems	June 24, 1890
430,748	O'Connell, J. J	do	June 24, 1890
430,758	Smith, H. B	Separators	June 24, 1890
430,764	Beers, C. B. and Tuttle, W. B	Magnetic locks and bolts	June 24, 1890
430,804	Hollerith, H	Indicators	June 24, 1890
430,838	Dewey, M. W	Heaters	June 24, 1890
430,839	Dewey, M. W	do	June 24, 1890

No.	NAME.	CLASS.	DATE.
430,846	Gannert, E. F	Lights, incandescent, special features	June 24, 1890
430,865	Leouard, H. W	Galvanometers	June 24, 1890
430,868	Mailloux, C. O	Regulators	June 24, 1890
430,913	Bell, E. B	Telephones, details	June 24, 1890
430,926	Davis, W. M	Conductors, supports and insulators	June 24, 1890
430,932	Edison, T. A	Lights, incandescent	June 24, 1890
430,933	Edison, T. A	Lights, filaments and carbons	June 24, 1890
430,934	Edison, T. A	Lighting, systems	June 24, 1890
430,960	Kitsee, I	Telephones, systems	June 24, 1890
430,967	Miller, I. N	Cut-outs, thermal	June 24, 1890
430,974	Sanche, H	Conductors	June 24, 1890
430,979	Winegarden, J	Alarms, burglar	June 24, 1890
430,990	Davis, J. H	Batteries, galvanic	June 24, 1890
430,991	Davis, J. H	Lights, filaments and carbons	June 24, 1890
430,992	Drake, C. C	Telegraphy, fire	June 24, 1890
431,011	Smith, W. J. and Fox, J. W	Railway signals	June 24, 1890
431,017	Conly, M. S	do	June 24, 1890
431,018	Edison, T. A	Magueto-electric	June 24, 1890
431,020	Brown, P	Motors	June 24, 1890

APPENDIX No. IX.

PART III.

CONSISTING OF A

ALPHABETICAL INDEX OF ALL PATENTS

RELATING TO

ELECTRICITY

Issued from July 1, 1889, to June 30, 1890, inclusive, giving names of Inventors,
numbers and dates of Patents, and the sub-class to which each belongs.

ALPHABETICAL INDEX

OF

PATENTS RELATING TO ELECTRICITY

FROM JULY 1, 1889, TO JUNE 30, 1890.

No.	NAME.	CLASS.	DATE.
412,579	Abdank-Abakanowicz, A	Telephones, electric	Oct. 8, 1889
412,580	Abdank-Abakanowicz, A	do	Oct. 8, 1889
407,761	Acheson, E. G	Magneto-electric	July 30, 1889
407,762	Acheson, E. G	do	July 30, 1889
407,763	Acheson, E. G	do	July 30, 1889
421,887	Adair, J	Locomotion	Feb. 25, 1890
414,933	Adams, F. U	Street lamps	Nov. 12, 1889
414,132	Adams, S. J	Telephones, supports	Oct. 29, 1889
408,334	Adams, T. E	Locomotion	Aug. 6, 1889
413,818	Adams, T. E	do	Oct. 29, 1889
416,284	Adams, T. E	Connectors	Dec. 3, 1889
419,618	Adams, T. E	Locomotion	Jan. 21, 1890
421,469	Adeney, W. E. and Saunderson, L	Lights, filaments and carbons	Feb. 18, 1890
430,260	Alcock, A. U. and Galopin, H	Lights, arc, gravity feed, clutch	June 17, 1890
408,367	Aldrich, N. B	Batteries, secondary	Aug. 6, 1889
430,606	Alexander, W. W	Electro-magnets	June 24, 1890
430,607	Alexander, W. W	Telephones, calls	June 24, 1890
430,608	Alexander, W. W	do	June 24, 1890
409,815	Allen, R. N	Locomotion	Aug. 27, 1889
429,107	Allen, R. N	Electric locomotives	June 3, 1890
415,490	Allen, W. H	Batteries, secondary	Nov. 19, 1889
428,586	Alton, G. H	Cut-outs, mechanical	May 27, 1890
421,222	Alton, G. H. and Wakefield, W. O	Magneto-electric	Feb. 11, 1890
414,000	Amet, E. H	Vending apparatus	Oct. 29, 1889
423,654	Amet, E. H	Applications, general	Mar. 18, 1890
406,981	Amory, A. and R	Batteries, secondary, applications	July 16, 1889
412,157	Andersen, A	Locomotion	Oct. 1, 1889
429,054	Andersen, J. M	Cut-outs, mechanical	June 10, 1890
412,155	Anderson, A	Locomotion	Oct. 1, 1889
414,362	Anderson, A	Connectors	Nov. 5, 1889
406,982	Anderson, F	Telegraphy, automatic	July 16, 1889
407,460	Anderson, F	do	July 23, 1889
407,461	Anderson, F	do	July 23, 1889
407,462	Anderson, F	do	July 23, 1889
426,749	Anderson, F	do	Apr. 29, 1890
429,109	Anderson, F	Motors, alternating	June 3, 1890
428,545	Andrews, E	Insulators	May 20, 1890
406,415	Andrews, W. S. and Spencer, T	Magneto-electric	July 9, 1889
411,414	Anthony, W. A	Separators	Sept. 24, 1889
421,090	Anthony, W. A	Motors	Feb. 11, 1890
427,823	Anthony, W. A	Cut-outs, thermal	May 13, 1890
411,772	Armstrong, C. G	Annunciators	Oct. 1, 1889
418,778	Armstrong, C. G	Telegraphy, fire	Jan. 7, 1890
418,837	Armstrong, C. G	Batteries, galvanic	Jan. 7, 1890
428,443	Ashbaugh, J. I	Heaters	May 20, 1890
412,449	Askew, C. B	Rheostats	Oct. 8, 1889
413,011	Asmus, G. C	Lights, arc, special features	Oct. 15, 1889
427,951	Atterbury, T. B	Lamp-shades	May 13, 1890
411,950	Atwater, A. S	Magneto-electric	Oct. 1, 1889
422,107	Ayer, C. H	Medical and surgical, body-wear	Feb. 25, 1890
420,710	Bache, R. M	Electrodes	Feb. 4, 1890
406,498	Backstrom, C. A	Lights, incandescent	July 9, 1889
415,338	Backus, E	Car brakes	Nov. 19, 1889
424,401	Bagby, W. J	Meters	Mar. 25, 1890
418,636	Baillard, G. C	Lights, incandescent, special features	Dec. 31, 1889
427,032	Bain, F	Rheostats	May 6, 1890
417,217	Baker, C. D. and Bronson, L. G	Telegraphy, relays and sounders	Dec. 17, 1889
413,429	Baker, E. B	Telegraphy, lightning arresters	Oct. 22, 1889
406,331	Baker, W. H	Connectors	July 2, 1889

No.	NAME.	CLASS.	DATE.
417,132	Baldwin, C. W.	Applications, tools and machines	Dec. 10, 1889
417,402	Balsley, U. H.	Conductors, anti-inductive	Dec. 17, 1889
408,948	Barker, W. H.	Lights, arc, gravity feed, clutch	Aug. 13, 1889
408,157	Barrett, J. A.	Galvanometers	July 30, 1889
414,626	Barrett, J. A.	Induction coils	Nov. 5, 1889
414,627	Barrett, J. A.	Batteries, galvanic	Nov. 5, 1889
424,751	Barrett, J. A.	Conductors	Apr. 1, 1890
411,370	Barrett, S. H.	Batteries, secondary	Sept. 17, 1889
413,160	Barrett, S. H.	Lighting, systems	Oct. 22, 1889
430,504	Barrett, M. M. and Daly, J. F.	Air and gas engines, explosive	June 17, 1890
430,505	Barrett, M. M. and Daly, J. F.	do	June 17, 1890
430,506	Barrett, M. M. and Daly, J. F.	do	June 17, 1890
423,891	Barriett, S. L.	Motors	Mar. 18, 1890
420,139	Barringer, J. J. and Johnston, T. H.	Street lamps	Jan. 28, 1890
416,662	Bartlett, S. H.	Friction generators	Dec. 3, 1889
422,174	Bartlett, S. H. and Waite, H. E.	Telephones, details	Feb. 25, 1890
429,594	Bartlett, W. A.	Air and spring guns	June 10, 1890
423,405	Barton, S.	Ships, submarine and torpedo	Mar. 11, 1890
429,751	Barnard, J. H.	Meters	June 10, 1890
417,660	Barney, W. C.	Telephones, details	Dec. 17, 1889
425,726	Batchelor, C.	Cut-outs, electro-magnetic	Apr. 15, 1890
415,491	Bates, P. S.	Meters	Nov. 19, 1889
414,966	Battershall, J. W.	Cut-outs, mechanical	Nov. 12, 1889
423,207	Bauer, A. H.	Lights, incandescent, special features	Mar. 11, 1890
420,984	Bayne, G. G.	Telegraphy, lightning arresters	Feb. 11, 1890
423,897	Baxter, W., jr.	Regulators	Mar. 25, 1890
420,183	Beach, F. G. and Cook, F. B.	Telephones, systems	Jan. 23, 1890
424,752	Beach, R. H.	Lights, arc, positive feed	Apr. 1, 1890
429,596	Beattie, J., jr.	Batteries, galvanic	June 10, 1890
412,013	Beebe, E. W.	Thermostats	Oct. 1, 1889
430,764	Beers, C. B. and Tuttle, W. B.	Magnetic locks and bolts	June 24, 1890
415,695	Belding, W. S.	Magneto-electric	Nov. 26, 1889
415,696	Belding, W. S.	do	Nov. 26, 1889
415,697	Belding, W. S.	do	Nov. 26, 1889
415,805	Belding, W. S.	Machines for winding	Nov. 26, 1889
415,806	Belding, W. S.	Magneto-electric	Nov. 26, 1889
430,058	Bell, C. M. and Norton, S.	Separators	June 10, 1890
430,913	Bell, E. B.	Telephones, details	June 24, 1890
427,540	Bell, L.	Telegraphy, lightning arresters	May 13, 1890
427,541	Bell, L.	Railways, systems, circuits, multiple arc	May 13, 1890
413,890	Bemis, S. A.	Railway cars, trucks	Oct. 29, 1889
410,871	Bemis, S. A. and Pfingst, L.	do	Sept. 10, 1889
407,154	Bennett, E. H., jr.	Magneto-electric	July 16, 1889
412,159	Bennett, F. M.	Cut-outs, mechanical	Oct. 1, 1889
409,135	Bentley, E. M.	Rheostats	Aug. 13, 1889
424,699	Bentley, E. M.	Locomotion	Apr. 1, 1890
424,845	Bentley, E. M.	do	Apr. 1, 1890
426,580	Bentley, E. M.	do	Apr. 29, 1890
427,724	Bentley, E. M.	Cut-outs, electro-magnetic	May 13, 1890
427,725	Bentley, E. M.	Locomotion	May 13, 1890
427,726	Bentley, E. M.	do	May 13, 1890
430,060	Bentley, E. M.	Systems of distribution	June 10, 1890
430,263	Bentley, E. M.	Railway signals	June 17, 1890
412,361	Bergmann, S.	Lights, sockets and keys	Oct. 8, 1889
424,595	Bergmann, S. and Scott, G. B.	Regulators	Apr. 1, 1890
422,705	Berrenberg, A. and Umbehend, J.	Cut-outs, mechanical	Mar. 4, 1890
425,853	Berne, A. W.	Telephones, systems	Apr. 15, 1890
416,090	Best, A. W. and Underwood, H. G.	Gearing	Nov. 26, 1889
420,762	Bishop, J. D.	Meters	Feb. 4, 1890
425,061	Bishop, J. D.	Telegraphy, lightning arresters	Apr. 8, 1890
429,255	Bishop, J. D.	Conductors, lead-covered	June 3, 1890
429,599	Bishop, J. D.	Annunciators	June 10, 1890
409,628	Bishop, W. S.	Cut-outs, thermal	Aug. 20, 1889
419,308	Black, B. J.	Locomotion	Jan. 14, 1890
419,309	Black, B. J. and Jenkins, W. F.	do	Jan. 14, 1890
406,420	Blackwell, F. O.	do	July 9, 1889
406,421	Blackwell, F. O.	do	July 9, 1889
408,647	Blackwell, F. O.	Rheostats	Aug. 6, 1889
410,264	Blackwell, F. O.	Locomotion	Sept. 3, 1889
410,265	Blackwell, F. O.	Magneto-electric	Sept. 3, 1889
417,974	Blackwell, F. O.	Locomotion	Dec. 24, 1889
424,848	Blackwell, F. O.	do	Apr. 1, 1890
425,488	Blackwell, F. O.	do	Apr. 15, 1890
425,489	Blackwell, F. O.	do	Apr. 15, 1890
426,102	Blackwell, F. O.	do	Apr. 22, 1890
418,978	Blades, H. H.	Motors	Jan. 7, 1890
412,234	Blake, R.	Telephones, details	Oct. 8, 1889

No.	NAME.	CLASS.	DATE.
425,202	Blanchard, S. W	Elevators	Apr. 8, 1890
423,210	Blathy, O. T	Meters	Mar. 11, 1890
429,413	Blauvelt, W. S	Railways, systems, overhead, trolleys	June 3, 1890
426,705	Bleakley, W. M	Alarms, burglar	Apr. 29, 1890
426,706	Bleoo, J. H	do	Apr. 29, 1890
411,088	Boardman, F. R	Lights, arc and incandescent	Sept. 17, 1889
421,851	Bock, L., jr	Indicators	Feb. 18, 1890
424,535	Bock, L., jr	Motors	Apr. 1, 1890
408,205	Boissier, H. R	Regulators	Aug. 6, 1889
408,206	Boissier, H. R	Magneto-electric	Aug. 6, 1889
415,700	Bonta, J. W	Telephones, magnetic	Nov. 26, 1889
420,858	Boss, G. W	Railway signals	Feb. 4, 1890
420,859	Boss, G. W	do	Feb. 4, 1890
408,286	Bottomo, T. D	Lights, filaments and carbons	Aug. 6, 1889
408,287	Bottomo, T. D	Batteries, secondary	Aug. 6, 1889
414,792	Bottomo, T. D	Cut-outs, thermal	Nov. 12, 1889
406,423	Bower, J. F	Annunciators	July 9, 1889
422,876	Bower, J. F	Spring scales	Mar. 4, 1890
428,038	Bowen, E. H	Magneto-electric	May 13, 1890
427,221	Boynton, E. M	Locomotion	May 6, 1890
421,479	Brace, De W. B	Magneto-electric	Feb. 18, 1890
427,294	Brace, De W. B	do	May 6, 1890
415,936	Bradbury, J. G. and Stone, F. J	Batteries, secondary	Nov. 26, 1889
410,663	Bradford, J. M	Regulators	Sept. 10, 1889
429,333	Bradford, J. M	do	June 3, 1890
409,448	Bradley, C. S	Batteries, secondary	Aug. 20, 1889
409,449	Bradley, C. S	Transmission of power	Aug. 20, 1889
409,450	Bradley, C. S	do	Aug. 20, 1889
420,764	Bradley, C. S	Batteries, thermal	Feb. 4, 1890
425,741	Bradley, J. J	Lights, sockets and keys	Apr. 15, 1890
415,896	Bradner, W. F	Drop-lights and hangers	Nov. 26, 1889
415,897	Bradner, W. F	do	Nov. 26, 1889
413,220	Brady, T. H	Lights, arc, special features	Oct. 22, 1889
418,270	Braun, D. J	Lights, incandescent, special features	Dec. 31, 1889
428,066	Breese, C. P	Lights, arc, positive feed, clutch	May 20, 1890
427,966	Brill, G. M. and J. A	Railway cars, trucks	May 13, 1890
426,657	Brill, J. A	Locomotion	Apr. 29, 1890
426,658	Brill, J. A	do	Apr. 29, 1890
426,708	Brill, J. A	do	Apr. 29, 1890
430,373	Broichgans, S	Alarms, burglar	June 17, 1890
408,574	Brooks, D., jr	Conductors, lead-covered	Aug. 6, 1889
410,953	Brooks, D., jr	Conductors	Sept. 10, 1889
427,039	Brooks, D., jr	Conductors, underground	May 6, 1890
429,113	Brown, B. F	Railways, systems, overhead, trolleys	June 3, 1890
422,910	Brown, H. P	Lighting, systems	Mar. 11, 1890
428,071	Brown, H. P	Locomotion	May 20, 1890
428,072	Brown, H. P	do	May 20, 1890
420,552	Brown, J. E. and J. F	Lights, incandescent, special features	Feb. 4, 1890
428,073	Brown, L. V	Magneto-electric	May 20, 1890
423,901	Brown, R. G	Telegraphy, multiplex	Mar. 25, 1890
423,902	Brown, R. G	do	Mar. 25, 1890
423,903	Brown, R. G	do	Mar. 25, 1890
431,020	Brown, P	Motors	June 24, 1890
425,929	Bruckner, C. C. and Baleck, S. W	Engraving	Apr. 15, 1890
423,023	Bruner, A	Conductors, underground	Mar. 11, 1890
423,549	Brunning, C. E	Medical and surgical, body-wear	Mar. 18, 1890
427,548	Brush, C. F	Cut-outs, thermal	May 13, 1890
423,742	Brush, C. F	Magneto-electric	May 27, 1890
423,743	Brush, C. F	do	May 27, 1890
406,874	Buckley, J	Motors	July 16, 1889
407,327	Bnell, C. E	Magneto-electric, hand-machines	July 23, 1889
421,852	Bulen, G. F	Thermostats	Feb. 18, 1890
421,853	Bulen, G. F	Telegraphy, fire	Feb. 18, 1890
421,854	Bulen, G. F	do	Feb. 18, 1890
430,461	Bull, W. B	Incrustation	June 17, 1890
430,462	Bull, W. B	do	June 17, 1890
419,312	Bulluck, W	Alarms	Jan. 14, 1890
418,443	Bunnell, J. H	Telegraphy, relays and sounders	Dec. 31, 1889
418,444	Bunnell, J. H	Lights, arc, gravity feed, gear-clutch	Dec. 31, 1889
419,633	Burnley, W	Batteries, galvanic	Jan. 21, 1890
429,115	Burly, J	Telegraphy, printing	June 3, 1890
423,888	Burt, E. M	Batteries, galvanic	May 27, 1890
418,550	Burt, M. C	Gas	Dec. 31, 1889
418,551	Burt, M. C	do	Dec. 31, 1889
429,675	Burt, M. C	do	June 10, 1890
412,460	Burton, G. D	Telegraphy, circuit-closers	Oct. 8, 1889
426,522	Burton, G. D	Telegraphy, railway-car	Apr. 29, 1890

No.	NAME.	CLASS.	DATE.
427,042	Burton, G. D	Telegraphy, railway-car	May 6, 1890
427,151	Burton, G. D	Heaters	May 6, 1890
427,549	Burton, J. M	Applications, tools and machines	May 13, 1890
427,296	Busby, J. F	Insulators	May 6, 1890
430,463	Busenbenz, J. J	Vending apparatus	June 17, 1890
425,205	Bush, A. R	Cut-outs, mechanical	Apr. 8, 1890
411,423	Bussman, O. S	Cut-outs, thermal	Sept. 24, 1889
422,911	Butterfield, H. R	Motors	Mar. 11, 1890
424,403	Butterfield, H. R	Heaters	Mar. 25, 1890
424,047	Butterfield, H. R. and Mitchell, W	do	Mar. 25, 1890
424,404	Butterfield, H. R. and Mitchell, W	do	Mar. 25, 1890
409,316	Butz, A. M	Thermostats	Aug. 20, 1889
409,136	Cabell, J. G	Incrustation	Aug. 13, 1889
421,230	Cable, P. D	Railway signals	Feb. 11, 1890
419,313	Cade, B	Telegraphy, railway-car	Jan. 14, 1890
419,314	Cade, B	Locomotion	Jan. 14, 1890
414,970	Camp, H. B	Conductors, underground	Nov. 12, 1889
423,468	Campbell, G. G	Locomotion	Mar. 18, 1890
411,137	Campbell, H. F	Conductors, anti-inductive	Sept. 17, 1889
413,707	Campbell, H. F	do	Oct. 29, 1889
428,745	Candee, W. L	Conductors, lead-covered	May 27, 1890
424,921	Capek, J. V	Heaters	Apr. 1, 1890
424,922	Capek, J. V	do	Apr. 1, 1890
408,910	Card, G. F	Motors	Aug. 13, 1889
411,782	Card, G. F	Regulators	Oct. 1, 1889
411,783	Card, G. F	do	Oct. 1, 1889
421,240	Cardew, P.	Cut-outs, thermal	Feb. 11, 1890
410,683	Carhart, E. M	Alarms, burglar	Sept. 10, 1889
412,462	Carley, C. R	Photography, burnishing presses	Oct. 8, 1889
415,856	Carpenter, C. E	Heaters	Nov. 26, 1889
429,559	Carpenter, C. E	do	June 3, 1890
429,560	Carpenter, C. E	do	June 3, 1890
429,561	Carpenter, C. E	do	June 3, 1890
429,562	Carpenter, C. E	do	June 3, 1890
429,012	Carpenter, C. F	Applications, tools and machines	May 27, 1890
412,727	Carpenter, H. H	Batteries, secondary	Oct. 15, 1889
414,288	Carpenter, H. H	Metal working, miscellaneous	Nov. 5, 1889
419,923	Carpenter, H. H	Conductors	Jan. 21, 1890
421,666	Carpenter, H. H	Batteries, secondary	Feb. 18, 1890
422,722	Carpenter, H. L	Telephones, calls	Mar. 4, 1890
414,492	Carr, C. P	Telegraphy, quadruplex	Nov. 5, 1889
424,268	Carr, R. B	Time checks	Mar. 25, 1890
412,464	Carranza, M. and Tinoco, J. M	Igniting devices, manual	Oct. 8, 1889
426,660	Carroll, W	Lamp posts	Apr. 29, 1890
409,390	Carson, R. D	Lights, arc, positive feed, gear-clutch	Aug. 20, 1889
410,136	Carter, C. H	Batteries, secondary	Aug. 27, 1889
411,138	Carter, C. H	Clocks, electric	Sept. 17, 1889
416,712	Carter, F. S	Annunciators	Dec. 10, 1889
415,765	Carty, J. J	Telephones, systems	Nov. 26, 1889
425,862	Carty, J. J	do	Apr. 15, 1890
425,863	Carty, J. J	do	Apr. 15, 1890
427,154	Carty, J. J	do	May 6, 1890
427,155	Carty, J. J	do	May 6, 1890
427,156	Carty, J. J	do	May 6, 1890
427,742	Carty, J. J	do	May 13, 1890
430,065	Case, J. D., and Evans, C. W	Music, electric actions	June 10, 1890
429,066	Case, J. D., and Evans, C. W	do	June 10, 1890
409,097	Casey, F. M	Applications, tools and machines	Aug. 13, 1889
419,111	Casey, F. M	do	Jan. 7, 1890
425,161	Cassard, H. L	Telephones, systems	Apr. 8, 1890
428,828	Cassard, H. L	Vending apparatus	May 27, 1890
422,500	Castner, H. Y	Electrolysis, chemicals	Mar. 4, 1890
419,924	Catz, J	Alarms	Jan. 21, 1890
423,309	Chamberlain, J. C	Magneto-electric	Mar. 11, 1890
427,459	Chamberlain, J. C	Locomotion	May 6, 1890
423,310	Chamberlain, R. N. and J. C	Batteries, secondary	Mar. 11, 1890
426,917	Chambers, W. H	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
414,141	Chapman, F. G. and Dearing, F. M	Lights, arc, positive feed	Oct. 29, 1889
428,454	Chapman, W. H	Motors	May 20, 1890
410,150	Chase, H. A	Locomotion	Sept. 3, 1889
430,622	Chase, J	Lights, arc, special features	June 24, 1890
416,051	Chassagne, P. J	Lights, sockets and keys	Nov. 26, 1889
406,994	Chinnock, F. R	Insulators	July 16, 1889
418,682	Christie, G. E	Telephones, supports	Jan. 7, 1890
414,289	Christy, W	Locomotion	Nov. 5, 1889
428,075	Church, B. S	Recorders	May 20, 1890
426,108	Clark, E. P	Regulators	Apr. 22, 1890

No.	NAME.	CLASS.	DATE.
426,109	Clark, E. P.	Regulators	Apr. 22, 1890
426,110	Clark, E. P.	do	Apr. 22, 1890
420,771	Clark, J. H.	Applications, tools and machines	Feb. 4, 1890
423,594	Clark, M. M.	Batteries, galvanic	Mar. 18, 1890
424,703	Clarke, G. D.	Electro-magnets	Apr. 1, 1890
418,685	Claus, P. and Gengenbach, E.	Magneto-electric	Jan. 7, 1890
416,092	Clawson, C. C.	Kaleidoscopes	Nov. 26, 1889
409,926	Clement, L. M. and Waters, G. C.	Railways, traction, underground	Aug. 27, 1889
425,493	Cleveland, W. B.	Locomotion	Apr. 15, 1890
413,708	Coad, T.	Lights, incandescent, special features	Oct. 29, 1889
408,374	Cobb, H. B.	Conductors, lead-covered	Aug. 6, 1889
408,375	Cobb, H. B.	do	Aug. 6, 1889
408,376	Cobb, H. B.	do	Aug. 6, 1889
408,377	Cobb, H. B.	do	Aug. 6, 1889
429,304	Cobb, H. B.	Conductors	June 3, 1890
429,305	Cobb, H. B.	do	June 3, 1890
429,306	Cobb, H. B.	do	June 3, 1890
429,307	Cobb, H. B.	Conductors, underground	June 3, 1890
419,829	Cobb, S. B.	Lights, incandescent	Jan. 21, 1890
415,617	Cody, J. L.	Passenger cars	Nov. 19, 1889
409,928	Coe, B. L.	Lamp-shades	Aug. 27, 1889
429,787	Coerper, C.	Lights, arc, gravity feed, gear-clutch	June 10, 1890
415,024	Coffin, C. C.	Electro-deposition	Nov. 12, 1889
409,015	Coffin, C. L.	Heaters	Aug. 13, 1889
412,599	Coffin, C. L.	do	Oct. 8, 1889
419,032	Coffin, C. L.	do	Jan. 7, 1890
419,033	Coffin, C. L.	do	Jan. 7, 1890
422,730	Coffin, C. L.	do	Mar. 4, 1890
423,732	Coffin, C. L.	do	Mar. 18, 1890
423,733	Coffin, C. L.	do	Mar. 18, 1890
423,734	Coffin, C. L.	do	Mar. 18, 1890
423,735	Coffin, C. L.	do	Mar. 18, 1890
423,736	Coffin, C. L.	do	Mar. 18, 1890
425,164	Coffin, C. L.	do	Apr. 8, 1890
427,971	Coffin, C. L.	do	May 13, 1890
428,459	Coffin, C. L.	do	May 20, 1890
410,493	Cohen, R. L.	Lights, arc, gravity feed, clutch	Sept. 3, 1889
423,026	Cohen, R. L.	Magneto-electric	Mar. 11, 1890
428,378	Colby, E. A.	Reducing and separating apparatus	May 20, 1890
428,379	Colby, E. A.	do	May 20, 1890
428,552	Colby, E. A.	Reducing and separating	May 20, 1890
424,273	Colby, E. A. and Strong, J. C.	Clocks, electric	Mar. 25, 1890
411,120	Cole, W. R.	Bells	Sept. 17, 1889
428,746	Colgate, A. E.	Galvanometers	May 27, 1890
429,887	Colgate, A. E.	do	June 10, 1890
409,929	Collier, J. W.	Lights, sockets and keys	Aug. 27, 1889
414,191	Conant, H. J.	Regulators	Nov. 5, 1889
416,713	Conklin, J. I.	Railway signals	Dec. 10, 1889
406,337	Conkling, G.	Separators	July 2, 1889
410,376	Conkling, G.	do	Sept. 10, 1889
410,377	Conkling, G.	do	Sept. 10, 1889
420,334	Conkling, G.	do	Jan. 28, 1890
422,732	Conkling, G.	do	Mar. 4, 1890
423,907	Conkling, G.	do	Mar. 25, 1890
11,012	Conkling, G.	do	July 16, 1889
428,041	Conly, M. S.	Railway signals	May 13, 1890
428,042	Conly, M. S.	Applications, general	May 13, 1890
431,017	Conly, M. S.	Railway signals	June 24, 1890
420,638	Conner, W. A.	Conductors	Feb. 4, 1890
424,761	Conroy, J. C.	Valve-controllers	Apr. 1, 1890
416,572	Conz, G. W. M.	Telegraphy, circuit-closers	Dec. 3, 1889
406,318	Cook, G. W.	Conductors, underground	July 9, 1889
407,950	Cooke, A. R.	Dental instruments	July 30, 1889
416,254	Cooley, C. A.	Covering cord	Dec. 3, 1889
423,909	Cooley, H. W.	Regulators	Mar. 25, 1890
416,443	Cooley, W. H.	Magneto-electric	Dec. 3, 1889
410,786	Cooper, A. J. and Wigzell, E. E.	Recorders	Sept. 10, 1889
418,889	Cooper, A. J. and Wigzell, E. E.	Bathometers	Jan. 7, 1890
417,407	Cooper, A. S.	Telegraphy, automatic	Dec. 17, 1889
416,444	Cooper, T.	Telegraphy, fire	Dec. 3, 1889
422,295	Cooper, W. B.	Magneto-electric	Feb. 25, 1890
421,134	Cope, T. J.	Conductors, underground	Mar. 11, 1890
427,746	Cordley, W. J.	Railways, systems, closed conduit	May 13, 1890
426,436	Corliss, G. F.	Locomotion	Apr. 29, 1890
419,642	Cornog, I. P.	Insulators	Jan. 21, 1890
411,093	Coughlin, W. H.	Connectors	Sept. 17, 1889
406,629	Coulter, G. A.	Telegraphy, fire, alarms and extinguishers	July 9, 1889

No.	NAME.	CLASS.	DATE.
416,573	Covert, D'E. S. and Pumpelly, J. K.	Batteries, secondary	Dec. 3, 1889
11,049	Cowley, J. T.	Store service	Dec. 24, 1889
414,295	Cox, C. A. and J. F.	Railway brakes, derailment	Nov. 5, 1889
418,910	Cox, C. A. and J. F.	Railway signals	Jan. 7, 1890
424,860	Cox, C. A. and J. F.	Telegraphy, fire, alarms and extinguishers	Apr. 1, 1890
411,713	Cox, F. P.	Lights, arc, positive feed, gear-clutch	Sept. 24, 1889
412,165	Cox, H. B.	Electrodes	Oct. 1, 1889
414,612	Cox-Walker, E. and Swiuton, A. A. C.	Bells	Nov. 5, 1889
425,370	Coyle, A. M.	Vending apparatus	Apr. 8, 1890
424,406	Crane, W. F. D.	Magneto-electric	Mar. 25, 1890
428,380	Croasdale, E.	do	May 20, 1890
430,175	Crockett, C. H. and Allen, C. C.	Telegraphy, fire	June 17, 1890
427,974	Crossley, L. J., Emmott, W. and Harrison, J. F.	Telephones, systems	May 13, 1890
413,848	Crull, E. S.	Telegraphy, keys	Oct. 29, 1889
419,645	Culbertson, J. N.	Telephones, systems	Jan. 21, 1890
419,186	Culman, D. A., jr.	Lamp shades	Jan. 14, 1890
414,681	Culver, F. E.	Railways, traction, underground	Nov. 12, 1889
429,844	Culver, J. P.	Drain tiles	June 10, 1890
408,829	Cumnock, V. I.	Knitting and netting, stopping	Aug. 13, 1889
414,025	Cumnock, V. I.	Spinning, stopping	Oct. 29, 1889
421,677	Cunningham, J. H.	Locomotion	Feb. 18, 1890
406,267	Currie, S. C. C.	Batteries, secondary	July 2, 1889
406,268	Currie, S. C. C.	Cut-outs, thermal	July 2, 1889
406,429	Currie, S. C. C.	Magneto-electric	July 9, 1889
408,590	Currie, S. C. C.	Locomotion	Aug. 6, 1889
410,153	Currie, S. C. C.	Batteries, secondary, applications	Sept. 3, 1889
411,786	Currie, S. C. C.	Batteries, secondary	Oct. 1, 1889
411,787	Currie, S. C. C.	do	Oct. 1, 1889
412,323	Currie, S. C. C.	do	Oct. 8, 1889
415,766	Currie, S. C. C.	Batteries, secondary, applications	Nov. 26, 1889
419,245	Currie, S. C. C.	Motors	Jan. 14, 1890
421,067	Currie, S. C. C.	Electro-magnets	Feb. 11, 1890
422,504	Currie, S. C. C.	Batteries, secondary	Mar. 4, 1890
422,505	Currie, S. C. C.	do	Mar. 4, 1890
423,029	Currie, S. C. C.	Regulators	Mar. 11, 1890
427,748	Currie, S. C. C.	Meters	May 13, 1890
427,749	Currie, S. C. C.	do	May 13, 1890
425,594	Currier, J. B.	Telephones, calls	Apr. 15, 1890
412,476	Cushing, J. P.	Locomotion	Oct. 8, 1889
429,189	Cushing, J. P.	Indicators	June 3, 1890
407,470	Cutler, H. H.	Locomotion	July 23, 1889
421,371	Cutler, J. L.	Telephones, calls	Feb. 11, 1890
426,989	Cutler, J. L.	do	Apr. 29, 1890
410,498	Daft, L.	Locomotion	Sept. 3, 1889
412,605	Daft, L.	do	Oct. 8, 1889
427,674	Daft, L.	Magneto-electric	May 13, 1890
411,426	Dahl, O.	Batteries, secondary	Sept. 24, 1889
426,778	Dalton, J.	Drop-lights and hangers	Apr. 29, 1890
416,720	Dalzell, J. A.	Magneto-electric	Dec. 10, 1889
411,238	Danals, C. A.	Cut-outs, electro-magnetic	Sept. 17, 1889
415,190	Daniels, T. E., jr.	Magneto-electric	Nov. 19, 1889
418,402	Darling, W. H.	Car-brakes	Dec. 31, 1889
419,753	Darling, W. H.	Locomotion	Jan. 21, 1890
411,427	Dashiell, C. C.	Conductors, underground	Sept. 24, 1889
424,006	Davies, C. L.	Telegraphy, circuits and systems	Mar. 25, 1890
420,777	Davis, F. E. and Scott, J., jr.	Covering cord	Feb. 4, 1890
425,990	Davis, F. E. and Scott, J., jr.	do	Apr. 22, 1890
425,991	Davis, F. E. and Scott, J., jr.	Motors	Apr. 22, 1890
428,201	Davis, F. E. and Scott, J., jr.	Covering cord	May 20, 1890
421,484	Davis, G. E.	Photography, cameras	Feb. 18, 1890
430,990	Davis, J. H.	Batteries, galvanic	June 24, 1890
430,991	Davis, J. H.	Lights, filaments and carbons	June 24, 1890
426,583	Davis, M. M.	Telegraphy, circuits and systems	Apr. 29, 1890
410,637	Davis, W. M.	Insulators	Sept. 10, 1889
430,926	Davis, W. M.	Conductors, supports and insulators	June 24, 1890
421,819	Davy, J. W.	Insulators	Feb. 18, 1890
414,798	Dawes, A.	Drop-lights and hangers	Nov. 12, 1889
416,447	Dawson, E. C.	do	Dec. 3, 1889
406,709	Dawson, J. W.	Alarms, burglar	July 9, 1889
427,953	De Baillehache, E. J. J.	Railway signals	May 13, 1890
413,436	Decrow, W. E.	Telegraphy, fire	Oct. 22, 1889
408,181	De Ferranti, S. Z.	Conductors	Aug. 20, 1889
408,295	De Ferranti, S. Z.	Meters	Aug. 6, 1889
408,403	De Ferranti, S. Z.	Magneto-electric	Aug. 6, 1889
408,404	De Ferranti, S. Z.	do	Aug. 6, 1889
409,182	De Ferranti, S. Z.	Systems of distribution	Aug. 20, 1889
409,183	De Ferranti, S. Z.	Connectors	Aug. 20, 1889

No.	NAME.	CLASS.	DATE.
409,349	De Ferranti, S. Z	Magneto-electric	Aug. 20, 1889
409,565	De Ferranti, S. Z	Systems of distribution	Aug. 20, 1889
409,566	De Ferranti, S. Z	do	Aug. 20, 1889
409,775	De Ferranti, S. Z	Locomotion	Aug. 27, 1889
422,755	De Ferranti, S. Z	Motors, alternating	Mar. 4, 1890
423,991	De Ferranti, S. Z	Magneto-electric	Mar. 25, 1890
427,751	De Ferranti, S. Z	Inductariums, transformers, stationary	May 13, 1890
429,534	De Khotinsky, A	Lights, filaments and carbons	June 3, 1890
429,535	De Khotinsky, A	do	June 3, 1890
406,997	Delany, P. B	Batteries, galvanic	July 16, 1889
416,288	Delany, P. B	Conuectors	Dec. 3, 1889
417,814	Delany, P. B	Batteries, galvanic	Dec. 24, 1889
425,597	Delany, P. B	Telegraphy, relays and sounders	Apr. 15, 1890
426,247	Delany, P. B	do	Apr. 22, 1890
417,992	Dell, J	Conductors, underground	Dec. 24, 1889
424,182	Dempf, J. A	Telegraphy, circuit-closers	Mar. 25, 1890
410,318	Denio, W. L	Telegraphy, fire, alarms and extinguishers	Sept. 3, 1889
413,133	Denison, S. P	Conductors, underground	Oct. 15, 1889
413,134	Denison, S. P	do	Oct. 15, 1889
409,903	De Vars, H. A. B. H	Metalloids	Aug. 27, 1889
430,515	Devore, D. B	Railways, systems, conduit	June 17, 1890
409,987	Devlin, T. C	Ganie counters	Aug. 27, 1889
406,390	Dewey, M. W	Telegraphy, printing	July 2, 1889
406,890	Dewey, M. W	Heaters	July 16, 1889
407,581	Dewey, M. W	Telegraphy, printing	July 23, 1889
408,465	Dewey, M. W	Applications, general	Aug. 6, 1889
408,875	Dewey, M. W	Heaters	Aug. 13, 1889
413,136	Dewey, M. W	do	Oct. 15, 1889
414,943	Dewey, M. W	Batteries, secondary, applications	Nov. 12, 1889
416,360	Dewey, M. W	Heaters	Dec. 3, 1889
418,911	Dewey, M. W	do	Jan. 7, 1890
418,912	Dewey, M. W	Systems of distribution	Jan. 7, 1890
419,841	Dewey, M. W	Locomotion	Jan. 21, 1890
420,641	Dewey, M. W	Heaters	Feb. 4, 1890
422,190	Dewey, M. W	do	Feb. 25, 1890
423,223	Dewey, M. W	do	Mar. 11, 1890
425,757	Dewey, M. W	do	Apr. 15, 1890
425,866	Dewey, M. W	Locomotion	Apr. 15, 1890
426,781	Dewey, M. W	Heaters	Apr. 29, 1890
427,405	Dewey, M. W	Magneto-electric	May 6, 1890
430,838	Dewey, M. W	Heaters	June 24, 1890
430,839	Dewey, M. W	do	June 24, 1890
406,822	Dey, H. E	Batteries, secondary	July 9, 1889
418,700	Dey, H. E	do	Jan. 7, 1890
418,701	Dey, H. E	Batteries, secondary, applications	Jan. 7, 1890
418,702	Dey, H. E	do	Jan. 7, 1890
418,703	Dey, H. E	do	Jan. 7, 1890
406,391	Dibble, H. D	Locomotion	July 2, 1889
429,233	Dickerson, E. N., jr	Telegraphy, multiplex	June 3, 1890
420,622	Dickerson, E. N., jr	Cut-outs, electro-magnetic	Feb. 4, 1890
411,538	Dickson, C. T	Telephones, supports	Sept. 24, 1889
409,603	Dickson, J. G. and R. and Snyder, P	Locomotion	Aug. 20, 1889
411,982	Diehl, P	Motors	Oct. 1, 1889
411,983	Diehl, P	do	Oct. 1, 1889
414,757	Diehl, P	do	Nov. 12, 1889
414,758	Diehl, P	do	Nov. 12, 1889
417,474	Diehl, P	do	Dec. 17, 1889
421,911	Diehl, P	do	Feb. 25, 1890
423,912	Diehl, P	Magneto-electric	Mar. 25, 1890
425,995	Diehl, P	Motors	Apr. 22, 1890
417,668	Dihlmann, C	Systems of distribution	Dec. 17, 1889
422,925	D'Infreville, G	Batteries, galvanic	Mar. 11, 1890
424,544	Donnelly, A. G	Fog signals	Apr. 1, 1890
410,270	Donner, W. H	Grinding mills, grist alarms	Sept. 3, 1889
410,502	Donner, W. H	do	Sept. 3, 1889
406,636	Dougans, M	Batteries, galvanic	July 9, 1889
413,038	Douglas, W. H	Meters	Oct. 15, 1889
425,125	Douglass, A	Lighting, systems	Apr. 8, 1890
406,341	Douse, T. R	Fire extinguishers, chemical	July 2, 1889
407,473	Dow, A	Medical and surgical, body-wear	July 23, 1889
427,468	Dow, A	do	May 6, 1890
412,606	Dow, L	Printing, setting and distributing	Oct. 8, 1889
430,569	Dowst, S. M. and Hosmer, F. H	Telephones, systems	June 17, 1890
430,992	Drake, C. C	Telegraphy, fire	June 24, 1890
426,437	Drew, C. W. and Francis, E. R	Heaters	Apr. 29, 1890
418,664	Dreyer, W	Printing, setting and distributing	Dec. 31, 1889
418,704	Duggan, J. A	Locomotion	Jan. 7, 1890

No.	NAME.	CLASS.	DATE.
424,866	Dulait, J.	Lights, arc, gravity feed, gear-clutch	Apr. 1, 1890
428,669	Dummer, E.	Electric locomotives	May 27, 1890
427,503	Duncan, L.	Motors	May 6, 1890
409,736	D'Unger, R.	Telephones, magnetic	Aug. 27, 1889
408,468	Dunlap, J. W., sr	Telephones, calls	Aug. 6, 1889
414,860	Dunlap, W. A.	Electro-deposition	Nov. 12, 1889
409,460	Dunn, F. M., Petticord, A. and King, J. H.	Alarms	Aug. 20, 1889
414,686	Dunn, P. J.	Girders and columns	Nov. 12, 1889
429,608	Dyer, R. N.	Lights, incandescent	June 10, 1890
430,633	Easton, L. F.	Thermostats	June 24, 1890
409,026	Eaton, W. S.	Engraving machines	Aug. 13, 1889
408,224	Eddy, W.	Telephones, calls	Aug. 6, 1889
425,568	Edelkamp, J.	Batteries, thermal	Apr. 15, 1890
414,879	Edgecomb, D. W. and Terry, C. A.	Annunciators	Nov. 12, 1889
406,130	Edison, T. A.	Lights, incandescent	July 2, 1889
406,824	Edison, T. A.	Meters	July 9, 1889
406,825	Edison, T. A.	do	July 9, 1889
406,567	Edison, T. A.	Telephones, details	July 9, 1889
411,016	Edison, T. A.	Lights, filaments and carbons	Sept. 17, 1889
411,017	Edison, T. A.	do	Sept. 17, 1889
411,018	Edison, T. A.	do	Sept. 17, 1889
411,019	Edison, T. A.	Lights, incandescent	Sept. 17, 1889
411,020	Edison, T. A.	Lights, filaments and carbons	Sept. 17, 1889
420,594	Edison, T. A.	Telegraphy, quadruplex	Feb. 4, 1890
422,072	Edison, T. A.	Telegraphy, duplex	Feb. 25, 1890
422,073	Edison, T. A.	Telegraphy, circuits and systems	Feb. 25, 1890
422,074	Edison, T. A.	Telegraphy, duplex	Feb. 25, 1890
422,578	Edison, T. A.	Telephones, relays and repeaters	Mar. 4, 1890
422,579	Edison, T. A.	do	Mar. 4, 1890
425,760	Edison, T. A.	Meters	Apr. 15, 1890
425,761	Edison, T. A.	Lights, incandescent	Apr. 15, 1890
425,762	Edison, T. A.	Cut-outs, thermal	Apr. 15, 1890
425,763	Edison, T. A.	Magneto-electric	Apr. 15, 1890
430,275	Edison, T. A.	Separators	June 17, 1890
430,279	Edison, T. A.	Batteries, galvanic	June 17, 1890
430,280	Edison, T. A.	Separators	June 17, 1890
430,932	Edison, T. A.	Lights, incandescent	June 24, 1890
430,933	Edison, T. A.	Lights, filaments and carbons	June 24, 1890
430,934	Edison, T. A.	Lighting, systems	June 24, 1890
431,018	Edison, T. A.	Magneto-electric	June 24, 1890
422,577	Edison, T. A. and Gilliland, E. T.	Anti-induction devices	Mar. 4, 1890
428,583	Egan, C. E. and Gray, H. F.	Time checks	May 20, 1890
413,438	Eggers, F. F.	Alloys	Oct. 22, 1889
428,900	Ehrlich, L.	Indicators	May 27, 1890
417,009	Eickemeyer, J. C.	Telephones, electric	Dec. 10, 1889
413,337	Eickemeyer, R.	Magneto-electric	Oct. 22, 1889
413,338	Eickemeyer, R.	Galvanometers	Oct. 22, 1889
413,339	Eickemeyer, R.	Batteries, secondary	Oct. 22, 1889
413,363	Eickemeyer, R.	Magneto-electric	Oct. 22, 1889
422,511	Eickemeyer, R.	do	Mar. 4, 1890
422,512	Eickemeyer, R.	Electro-magnets	Mar. 4, 1890
430,310	Eisenhuth, J. W.	Air and gas engines, explosive	June 17, 1890
430,312	Eisenhuth, J. W.	do	June 17, 1890
409,738	Elfering, J. H.	Applications, general	Aug. 27, 1889
412,700	Elkins, W. H.	Regulators	Oct. 8, 1889
427,163	Elkins, W. H.	do	May 6, 1890
427,164	Elkins, W. H.	do	May 6, 1890
430,634	Elkins, W. H.	do	June 24, 1890
416,289	Ellinwood, A. E.	Locomotion	Dec. 3, 1889
412,845	Ely, G. E.	Telegraphy, circuit-closers	Oct. 15, 1889
423,229	Emery, S. S.	Telegraphy, repeaters	Mar. 11, 1890
418,975	Emme, C. A.	Door bells	Jan. 7, 1890
417,998	Emmet, W. Le R.	Conductors, underground	Dec. 24, 1889
429,377	English, S. M.	Telegraphy, circuits and systems	June 3, 1890
415,962	Enholm, O. A.	Miscellaneous compositions	Nov. 26, 1889
415,963	Enholm, O. A.	Batteries, galvanic	Nov. 26, 1889
421,916	Entz, J. B. and Phillips, W. A.	Batteries, secondary	Feb. 25, 1890
425,999	Ejstein, L.	do	Apr. 22, 1890
408,600	Erickson, E. E.	Lights, incandescent, special features	Aug. 6, 1889
427,062	Erickson, E. E.	do	May 6, 1890
408,002	Ernst, V. H.	Batteries, secondary	July 30, 1889
417,158	Ernst, V. H.	do	Dec. 10, 1889
414,763	Estabrook, W. W.	Igniting devices, automatic	Nov. 12, 1889
425,066	Etheridge, H.	Telegraphy, automatic	Apr. 8, 1890
425,413	Etheridge, H.	do	Apr. 15, 1890
414,764	Euphrat, F.	Vending apparatus	Nov. 12, 1889
425,767	Evans, T. A.	Locomotion	Apr. 15, 1890

No.	NAME.	CLASS.	DATE.
409,673	Everett, C.	Medical and surgical, body-wear	Aug. 27, 1889
407,477	Ezell, F.	Applications, general	July 23, 1889
425,768	Ezell, F.	Dishes and plates	Apr. 15, 1890
413,250	Farciot, C. O.	Compasses	Oct. 22, 1889
415,628	Farmer, J. R.	Lamp-shades	Nov. 19, 1889
426,788	Farmer, M. G.	Electro-deposition	Apr. 29, 1890
426,789	Farmer, M. G.	do	Apr. 29, 1890
413,276	Farnham, I. H.	Telephones, systems	Oct. 22, 1889
422,339	Farnham, I. H.	Locomotion	Feb. 25, 1890
423,421	Farrall, T. D.	Heaters	Mar. 18, 1890
420,444	Farrell, G.	Cut-outs, thermal	Feb. 4, 1890
409,178	Faure, C. A.	Batteries, secondary	Aug. 20, 1889
429,895	Felt, G. H.	Batteries, galvanic	June 10, 1890
429,896	Felt, G. H.	do	June 10, 1890
429,897	Felt, G. H.	do	June 10, 1890
429,898	Felt, G. H.	do	June 10, 1890
428,247	Fenner, W. W.	Magnetic locks and bolts	May 20, 1890
428,770	Field, C. H.	Engraving machines	May 27, 1890
407,188	Field, S. D.	Locomotion	July 16, 1889
409,675	Field, S. D.	Telegraphy, relays and sounders	Aug. 27, 1889
428,748	Fike, D. M. and Huffman, J.	Railway signals	May 27, 1890
418,868	Finck, J.	Annunciators	Jan. 7, 1890
415,165	Finney, J. R.	Locomotion	Nov. 12, 1889
426,971	Firmann, H.	Projectiles, blasting and fuses	Apr. 29, 1890
429,899	Firman, L. B.	Railway signals	June 10, 1890
413,504	Fisher, F. E.	Annunciators	Oct. 22, 1889
411,742	Fisk, A. B.	Railway signals	Sept. 24, 1889
407,004	Fisk, N. S.	Telephones, supports	July 16, 1889
406,829	Fiske, B. A.	Indicators	July 9, 1889
406,830	Fiske, B. A.	do	July 9, 1889
418,510	Fiske, B. A.	do	Dec. 31, 1889
410,964	Fitch, A. S.	Magneto-electric, hand machines	Sept. 10, 1889
410,965	Fitch, A. S.	Magneto-electric	Sept. 10, 1889
410,966	Fitch, A. S.	do	Sept. 10, 1889
430,010	Flad, H.	Conductors, underground	June 10, 1890
411,801	Fletcher, J. R.	Insulators	Oct. 1, 1889
408,607	Flint, F. W.	Electrodes	Aug. 6, 1889
422,196	Flora, E. E. and Hoy, P. R.	Lights, incandescent, special features	Feb. 27, 1890
421,394	Foley, J. S.	Telegraphy, railway-car	Feb. 18, 1890
415,629	Foote, G. L.	Telegraphy, fire	Nov. 19, 1889
410,586	Foote, T. M.	Batteries, secondary, applications	Sept. 10, 1889
427,259	Forbes, G.	Magneto-electric	May 6, 1890
415,710	Fowler, F. E.	Locomotion	Nov. 26, 1889
415,504	Fowler, G.	Insulators	Nov. 19, 1889
417,013	Fowler, H. E.	Heaters	Dec. 10, 1889
428,084	Frager, A.	Meters	May 20, 1890
418,559	Frager, A. J.	do	Dec. 31, 1889
411,496	Fraley, G. B.	Locomotion	Sept. 24, 1889
426,563	Frankenberg, A. M.	Induction coils	Apr. 29, 1890
421,396	Frei, G. A.	Cut-outs, thermal	Feb. 18, 1890
423,600	Frei, G. A.	Galvanometers	Mar. 18, 1890
416,406	Frith, F. W.	Railway signals	Dec. 3, 1889
418,560	Frost, E.	Bells	Dec. 31, 1889
422,201	Fryer, G. G.	Motors, reciprocating	Feb. 25, 1890
423,630	Fuller, J. A.	Water gages, float	Mar. 18, 1890
410,545	Furlong, L. F.	Cut-outs, thermal	Sept. 3, 1889
430,846	Gannert, E. F.	Lights, incandescent, special features	June 24, 1890
428,087	Garrett, D.	Electro-deposition	May 20, 1890
428,810	Garsed, R. P.	Annunciators	May 27, 1890
430,735	Garsed, R. P.	do	June 24, 1890
425,068	Garver, M. M.	Galvanometers	Apr. 8, 1890
425,069	Garver, M. M.	do	Apr. 8, 1890
426,992	Garver, M. M.	do	Apr. 29, 1890
406,897	Gaynor, T. F.	Cut-outs, mechanical	July 16, 1889
408,968	Gaynor, T. F.	Bells	Aug. 13, 1889
411,805	Gaynor, T. F.	Iron structures	Oct. 1, 1889
414,695	Gaynor, T. F.	Applications, tools and machines	Nov. 12, 1889
423,753	Gee, W.	Alarms, burglar	Mar. 18, 1890
414,900	Geisenhöner, H.	Magneto-electric	Nov. 12, 1889
426,932	Gendron, F.	Batteries, galvanic	Apr. 29, 1890
413,442	Gennert, E. F.	Lights, incandescent, special features	Oct. 22, 1889
426,121	Gennert, E. F.	do	Apr. 22, 1890
413,340	Gerry, J. H.	Clocks, electric	Oct. 22, 1889
427,070	Gibbs, W. E.	Dental instruments	May 6, 1890
412,332	Gibson, W. P.	Applications, tools and machines	Oct. 8, 1889
412,333	Gibson, W. P.	do	Oct. 8, 1889
412,334	Gibson, W. P.	Controllers	Oct. 8, 1889

No.	NAME.	CLASS.	DATE.
409,189	Gilfillan, A. W	Indicators	Aug. 20, 1889
430,636	Gill, E. R., jr	Telephones, calls	June 24, 1890
430,637	Gill, E. R., jr	Railway signals	June 24, 1890
406,041	Gill, J. C	Insulators	July 2, 1889
410,886	Gill, O. A	Sack scales	Sept. 10, 1889
418,120	Gillett, W	Magneto-electric, hand machines	Dec. 24, 1889
424,057	Gilman, C. C	Conductors, underground	Mar. 25, 1890
415,864	Gilson, S. H	Insulating materials	Nov. 26, 1889
429,129	Ginochio, N. B	Telephones, magnetic	June 3, 1890
419,766	Glaeser, A	Magnetic locks and bolts	Jan. 21, 1890
428,750	Glass, L. and Arnold, W. S	Vending apparatus	May 27, 1890
428,751	Glass, L. and Arnold, W. S	do	May 27, 1890
416,779	Gleason, E. P	Fire-engines, stationary	Dec. 10, 1889
423,777	Godfrey, W. L	Magnetic locks and bolts	Apr. 15, 1890
428,772	Goldshmidt, P	Cordage, warping	May 27, 1890
417,018	Goodridge, W. M	Telephones, systems	Dec. 10, 1889
414,399	Goodson, G. A	Printing, matrix-making	Nov. 5, 1889
414,400	Goodson, G. A	do	Nov. 5, 1889
414,637	Goodson, G. A	Applications, tools and machines	Nov. 5, 1889
427,680	Goodson, G. A	Type-writing	May 13, 1890
427,681	Goodson, G. A	Printing, matrix-making	May 13, 1890
410,410	Goodwin, C. Q	Conductors, lead-covered	Sept. 3, 1889
414,308	Goucher, A. A	Alarms, burglar	Nov. 5, 1889
409,574	Gould, C. C	Telephones, systems	Aug. 20, 1889
422,765	Gould, C. C	do	Mar. 4, 1890
421,567	Grah, W., jr	Magnetic locks and bolts	Feb. 18, 1890
408,383	Graham, C. G	Insulators	Aug. 6, 1889
409,146	Grassler, W. F	Railway signals	Aug. 13, 1889
408,709	Gray, W	Telephones, systems	Aug. 13, 1889
426,266	Gray, W	do	Apr. 22, 1890
415,324	Green, L. R	Bridges, girders and columns	Nov. 19, 1889
415,325	Green, L. R	do	Nov. 19, 1889
425,071	Green, L. R	do	Apr. 8, 1890
429,030	Greenfell, H. H	Fire-arms, sights	May 27, 1890
427,984	Griffin, C. M	Telegraphy, lightning arresters	May 13, 1890
421,398	Griffin, P. H	Locomotion	Feb. 18, 1890
425,570	Griggs, A. C	Alarms	Apr. 15, 1890
419,043	Grimley, C. H	Medical and surgical, body-wear	Jan. 7, 1890
406,439	Griscom, W. W	Batteries, secondary	July 9, 1889
406,833	Griscom, W. W	Locomotion	July 9, 1889
407,006	Griscom, W. W	Speed governors	July 16, 1889
408,231	Griscom, W. W	Locomotion	Aug. 6, 1889
408,232	Griscom, W. W	do	Aug. 6, 1889
408,233	Griscom, W. W	Street cars, steam	Aug. 6, 1889
11,067	Griswold, L. F	Drop-lights and hangers	Mar. 18, 1890
406,726	Growth, H	Batteries, galvanic	July 9, 1889
412,177	Growth, H	Motors	Oct. 1, 1889
428,481	Growth, H	do	May 20, 1890
420,198	Guerrant, G. M	Lighting, systems	Jan. 28, 1890
428,482	Guss, O. G	Alarms	May 20, 1890
414,043	Gutmann, L	Regulators	Oct. 29, 1889
419,660	Gutmann, L	Systems of distribution	Jan. 21, 1890
419,661	Gutmann, L	Magneto-electric	Jan. 21, 1890
419,662	Gutmann, L	Systems of distribution	Jan. 21, 1890
419,663	Gutmann, L	do	Jan. 21, 1890
419,664	Gutmann, L	Motors, alternating	Jan. 21, 1890
423,552	Gutmann, L	Locomotion	Mar. 18, 1890
423,553	Gutmann, L	Regulators, alternating	Mar. 18, 1890
424,606	Gutmann, L	Systems of distribution	Apr. 1, 1890
426,269	Gutmann, L	Locomotion	Apr. 22, 1890
427,986	Gwynn, J. W	Street lamps	May 13, 1890
427,762	Haas, J., jr	Railway signals	May 13, 1890
426,009	Hadlock, W. E	Indicators	Apr. 22, 1890
410,276	Haenichen, F. and O	Telegraphy, relays and sounders	Sept. 3, 1889
420,057	Haight, H. J	Indicators	Jan. 28, 1890
413,782	Hall, A. W	Telephones, mechanical	Oct. 29, 1889
420,936	Hall, O. S	Medical and surgical, body-wear	Feb. 11, 1890
415,168	Hambury, J. T	Railways, interlocking	Nov. 12, 1889
418,125	Hamblet, J	Clocks, electric	Dec. 24, 1889
422,773	Hamilton, C. J	Annunciators	Mar. 4, 1890
425,507	Hamilton, C. J	Cut-outs, mechanical	Apr. 15, 1890
428,046	Hanagin, J. A	Connectors	May 13, 1890
416,604	Hansen, M. L	Meters	Dec. 3, 1889
416,605	Hansen, M. L	Batteries, secondary	Dec. 3, 1889
422,524	Happoldt, M. C	Cut-outs, electro-magnetic	Mar. 4, 1890
427,569	Harriman, W. F	Locomotion	May 13, 1890
422,245	Hart, A. W	Applications, tools and machines	Mar. 11, 1890

No.	NAME.	CLASS.	DATE.
428,095	Hart, O. W.	Annunciators	May 20, 1890
416,103	Harter, G. A.	Magnetic locks and bolts	Nov. 26, 1889
422,300	Hartmann, C. J.	Batteries, secondary	Feb. 25, 1890
422,301	Hartmann, C. J.	do	Feb. 25, 1890
411,551	Harris, L. S.	Regulators	Sept. 24, 1889
424,110	Harris, S.	Locomotion	Mar. 25, 1890
414,883	Harrison, E. L.	Alarms	Nov. 12, 1889
414,310	Haskins, C. D. and Scribner, C. E.	Telephones, systems	Nov. 5, 1889
412,089	Hawkes, T. G.	Reflectors	Oct. 1, 1889
419,771	Hawkesworth, R. W.	Locomotion	Jan. 21, 1890
422,591	Hayden, W. W. and Dickeman, C. S.	Drop-lights and hangers	Mar. 4, 1890
428,774	Hayward, E. and Sims, E. S.	Alarms, burglar	May 27, 1890
424,062	Hazard, R. R.	Railway cars, trucks	Mar. 25, 1890
414,155	Head, C. B.	Telegraphy, fire, alarms and extinguishers	Oct. 29, 1889
422,302	Head, H. H. and Saunderson, L.	Lights, filaments and carbons	Feb. 25, 1890
423,317	Heald, A.	Gas burners, incandescent	Mar. 11, 1890
407,480	Healy, C. L.	Telegraphy, relays and sounders	July 23, 1889
407,729	Healy, C. L.	Telegraphy, printing	July 23, 1889
407,730	Healy, C. L.	do	July 23, 1889
418,284	Healy, C. L.	Telegraphy, quadruplex	Dec. 31, 1889
430,645	Heath, J.	Lights, incandescent, special features	June 24, 1890
408,879	Hedbavny, A.	Furs and pelts	Aug. 13, 1889
428,604	Heisler, C.	Lights, filaments and carbons	May 27, 1890
411,380	Heller, F. G. A.	Cut-outs, thermal	Sept. 17, 1889
418,718	Henning, B. S.	Locomotion	Jan. 7, 1890
424,298	Henry, J. C.	do	Mar. 25, 1890
426,379	Henry, J. C.	do	Apr. 22, 1890
426,380	Henry, J. C.	Motors	Apr. 22, 1890
429,272	Hering, C.	Batteries, secondary	June 3, 1890
429,273	Hering, C.	do	June 3, 1890
429,274	Hering, C.	do	June 3, 1890
429,912	Hering, C.	do	June 10, 1890
429,913	Hering, C.	do	June 10, 1890
429,914	Hering, C.	do	June 10, 1890
415,182	Hess, A. T.	Annunciators	Nov. 12, 1889
421,169	Hewett, E. M. G.	Batteries, galvanic	Feb. 11, 1890
412,885	Heydler, E. F.	Telephones, electric	Oct. 15, 1889
426,724	Heyl, G. E.	Batteries, secondary	Apr. 29, 1890
421,048	Heymann, E. and F. W.	Regulators	Feb. 11, 1890
427,571	Heymann, E. and F. W.	Regulators, alternating	May 13, 1890
419,673	Hicks, T. H.	Locomotion	Jan. 21, 1890
420,300	Hicks, T. H.	Electrodes	Jan. 28, 1890
426,499	Hicks, T. H.	Galvanometers	Apr. 29, 1890
407,204	Higham, D.	Systems of distribution	July 16, 1889
407,293	Higham, D.	Regulators	July 16, 1889
409,463	Higham, D.	Magneto-electric	Aug. 20, 1889
407,660	Hill, C. F.	Lightning rods	July 23, 1889
424,786	Hill, E. A.	Medical and surgical, body-wear	Apr. 1, 1890
406,906	Hill, W. S.	Cut-outs, mechanical	July 16, 1889
426,381	Hinds, C. H.	Igniting devices, manual	Apr. 22, 1890
407,931	Hirlimann, C. J.	Batteries, galvanic	July 30, 1889
411,030	Hirlimann, C. J.	Motors	Sept. 17, 1889
413,058	Hirsch, L.	Applications, general	Oct. 15, 1889
430,075	Hitchcock, C. A.	Batteries, galvanic	June 10, 1890
413,279	Hochhausen, W.	Regulators	Oct. 22, 1889
413,280	Hochhausen, W.	do	Oct. 22, 1889
416,611	Hochhausen, W.	Lighting, systems	Dec. 3, 1889
416,612	Hochhausen, W.	Lights, systems and appliances	Dec. 3, 1889
410,896	Hoffmann, R.	Regulators	Sept. 10, 1889
425,572	Hofheimer, M.	Apparel, cutting	Apr. 15, 1890
420,334	Holcombe, A. G.	Telegraphy, fire	Jan. 28, 1890
430,804	Hollerith, H.	Indicators	June 24, 1890
407,593	Hollings, J. C.	Chandeliers	July 23, 1889
410,659	Hollings, J. C.	Lights, incandescent, special features	Sept. 10, 1889
419,674	Hollings, J. C.	do	Jan. 21, 1890
422,216	Holling-head, W. B.	Batteries, secondary	Feb. 25, 1890
427,513	Hollingshead, W. B.	Electro-deposition	May 6, 1890
422,592	Holman, F.	Lamp shades	Mar. 4, 1890
429,447	Hoene-man, F. P. and W. A.	Batteries, galvanic	June 3, 1890
427,514	Holmes, A. B. and Gale, G. F.	Lights, sockets and keys	May 6, 1890
409,963	Holmes, W. C.	Medical and surgical, body-wear	Aug. 27, 1889
418,871	Holt, G. A.	Indicators	Jan. 7, 1890
414,541	Hopkinson, J.	Systems of distribution	Nov. 5, 1889
412,135	Hopkinson, J. and E.	Regulators, alternating	Oct. 1, 1889
412,136	Hopkinson, J. and E.	do	Oct. 1, 1889
428,562	Houck, T. J.	Telegraphy, railway-car	May 20, 1890
427,574	Howard, B. C.	Heaters	May 13, 1890

No.	NAME.	CLASS.	DATE.
420,070	Howey, W. J	Alarms, burglar	Jan. 28, 1890
422,885	Hoyt, A. H	Induction coils	Mar. 4, 1890
419,524	Huber, J. H	Lamp shades	Jan. 14, 1890
421,498	Hubinger, J. C	Heaters	Feb. 18, 1890
421,499	Hubinger, J. C	do	Feb. 18, 1890
408,484	Huebner, L. and Busse, R.	Magnetic locks and bolts	Aug. 6, 1889
411,124	Huestis, F. W	Batteries, secondary	Sept. 17, 1889
418,369	Huff, G. E	Conductors, insulators	Dec. 31, 1889
413,512	Hull, R. C	Motors	Oct. 22, 1889
407,210	Hunter, J. H	Lighting, systems	July 16, 1889
417,188	Hunter, J. H	Railway signals	Dec. 10, 1889
413,604	Hunter, R. M	Locomotion	Oct. 22, 1889
414,049	Hunter, R. M	do	Oct. 29, 1889
414,050	Hunter, R. M	do	Oct. 29, 1889
417,920	Hunter, R. M	Heaters	Dec. 24, 1889
418,893	Hunter, R. M	Locomotion	Jan. 7, 1890
424,206	Hunter, R. M	do	Mar. 25, 1890
424,207	Hunter, R. M	do	Mar. 25, 1890
424,607	Hunter, R. M	do	Apr. 1, 1890
424,928	Hunter, R. M	do	Apr. 1, 1890
425,076	Hunter, R. M	do	Apr. 8, 1890
425,077	Hunter, R. M	do	Apr. 8, 1890
425,883	Hunter, R. M	do	Apr. 15, 1890
426,382	Hunter, R. M	do	Apr. 22, 1890
427,515	Hunter, R. M	Systems of distribution	May 6, 1890
428,098	Hunter, R. M	Locomotion	May 20, 1890
428,210	Hunter, R. M	Electric locomotives	May 20, 1890
428,211	Hunter, R. M	Locomotion	May 20, 1890
429,025	Hunter, R. M	Railways, systems, conduit	June 10, 1890
429,093	Hunter, R. M	Railways, systems, overhead	May 27, 1890
429,094	Hunter, R. M	Motors, alternating	May 27, 1890
429,687	Hunter, R. M	Locomotives	June 10, 1890
430,076	Hunter, R. M	Railways, systems, circuits, multiple are	June 10, 1890
430,208	Hunter, R. M	do	June 17, 1890
430,580	Hunter, R. M	Railways, systems, overhead, trolleys	June 17, 1890
406,168	Hussey, C. A	Batteries, galvanic	July 2, 1889
406,169	Hussey, C. A	do	July 2, 1889
414,220	Hussey, C. A	do	Nov. 5, 1889
414,317	Hussey, C. A	do	Nov. 5, 1889
414,318	Hussey, C. A	do	Nov. 5, 1889
413,281	Hussey, M. L. M	Clocks, electric	Oct. 22, 1889
411,595	Hyland, D. M	Conductors, underground	Sept. 24, 1889
411,443	Hyman, D	Street lamps	Sept. 24, 1889
425,078	Hynes, M	Annunciators	Apr. 8, 1890
429,033	Ide, F. F	Applications, general	May 27, 1890
414,052	Immich, M	Regulators	Oct. 29, 1889
427,235	Ingraham, A. A	Motors	May 6, 1890
428,917	Ingraham, A. A	Electric locomotives	May 27, 1890
419,774	Irish, W. E	Batteries, galvanic	Jan. 21, 1890
429,172	Irwin, J. H	Lights, incandescent	June 3, 1890
430,128	Irwin, J. H	Telephones, electric	June 17, 1890
411,989	Jackson, C. A	Locomotion	Oct. 1, 1889
415,641	Jaeger, C. L	Regulators	Nov. 19, 1889
422,219	Jaeger, H. J	Air and gas pumps, pneumatic	Feb. 25, 1890
426,384	Jasper, W	Veloipedes	Apr. 22, 1890
428,723	Jeffers, C. L	Drop-lights and hangers	May 27, 1890
416,920	Jenkins, W. F	Locomotion	Dec. 10, 1889
428,564	Jenks, W. J	Cut-outs, thermal	May 20, 1890
410,670	Jenney, C. D	Magneto-electric	Sept. 10, 1889
417,487	Jenney, C. D	Regulators	Dec. 17, 1889
422,419	Jenney, C. D	Magneto-electric	Mar. 4, 1890
424,065	Jenney, C. D	do	Mar. 25, 1890
409,104	Jennings, B	Locomotion	Aug. 13, 1889
406,284	Johns, H. W., jr	Conductors	July 2, 1889
411,198	Johnson, A. E	Telegraphy, transmitters	Sept. 17, 1889
420,804	Johnson, D. E	Locomotion	Feb. 4, 1890
418,843	Johnson, D. E	do	Jan. 7, 1890
425,801	Johnson, F	Lighting, systems	Apr. 15, 1890
420,234	Johnson, G. A	Batteries, secondary	Jan. 28, 1890
412,095	Johnson, I. La R	Conductors, underground	Oct. 1, 1889
415,110	Johnson, I. La R	do	Nov. 12, 1889
411,448	Johnson, J. and Packer, E. H	Gas stoves	Sept. 24, 1889
410,592	Johnson, J. R	Magneto-electric	Sept. 10, 1889
416,366	Johnson, T. L	Locomotion	Dec. 3, 1889
423,324	Johnson, W. A. and Smith, J. N	Batteries, secondary	Mar. 11, 1890
412,758	Johnston, W. C., jr	Telegraphy, circuit-closers	Oct. 15, 1889
420,906	Johnson, W. S	Batteries, secondary, applications	Feb. 4, 1890

No.	NAME.	CLASS.	DATE.
419,776	Jones, A. B.	Clocks, electric	Jan. 21, 1890
424,209	Jones, F. W.	Telegraphy, quadruplex	Mar. 25, 1890
425,511	Jones, F. W.	Telegraphy, keys	Apr. 15, 1890
426,591	Jones, F. W.	Telegraphy, quadruplex	Apr. 29, 1890
426,819	Jones, F. W.	do	Apr. 29, 1890
427,873	Jones, J. W.	Alarms	May 13, 1890
416,368	Jordan, L. F.	Drop-lights and hangers	Dec. 3, 1889
418,134	Julian, H. F.	Reducing and separating, metallurgy	Dec. 24, 1889
429,133	Kammeyer, C. E.	Cut-outs, thermal	June 3, 1890
415,274	Kane, H. H.	Medical and surgical, body-wear	Nov. 19, 1889
423,676	Karr, H. C.	Clocks, electric	May 27, 1890
424,295	Kaslan, J. P.	Knitting and netting, stopping	Mar. 25, 1890
427,576	Kaylor, J. S.	Telegraphy, keys	May 13, 1890
416,169	Keith, N. S.	Regulators	Dec. 3, 1889
429,573	Keller, C. L.	Lights, arc, gravity feed, gear-clutch	June 3, 1890
424,310	Kellogg, M. G.	Telephones, systems	Mar. 25, 1890
427,087	Kellogg, M. G.	do	May 6, 1890
407,014	Kelly, J. F. and Brangs, P. H.	Regulators	July 16, 1889
422,802	Kennedy, J. C.	Inhalers and respirators	Mar. 4, 1890
430,387	Kennedy, J. C.	Applications, general	June 17, 1890
415,327	Kennedy, P. and Diss, C. J.	Batteries, secondary	Nov. 19, 1889
407,294	Kennedy, R.	Systems of distribution	July 16, 1889
11,031	Kennedy, R.	do	Sept. 24, 1889
419,264	Kennelly, A. E.	Meters	Jan. 14, 1890
410,976	Kerner, G. and Marx, J.	Electrolysis	Sept. 10, 1889
415,644	Kerner, G. and Marx, J.	do	Nov. 19, 1889
412,924	Kester, J. F.	Applications, general	Oct. 15, 1889
422,948	Kilbourn, W. H.	Applications, tools and machines	Mar. 11, 1890
422,803	Kildoyle, E. E.	Alarms	Mar. 4, 1890
425,101	Kilian, C. J.	Locomotion	Apr. 8, 1890
427,578	Kilian, C. J.	Conductors, supports and insulators	May 13, 1890
407,077	Kimball, J. L. and Wirt, H. C.	Lights, incandescent, special features	July 16, 1889
411,041	King, A. S. and Swaney, W. H.	Regulators, gas	Sept. 17, 1889
412,554	Kingdon, J. A.	Magneto-electric	Oct. 15, 1889
407,895	Kinsman, F. E.	Lighting, systems	July 30, 1889
411,287	Kinsman, F. E.	Lights, arc, gravity feed, gear-clutch	Sept. 17, 1889
412,925	Kinsman, F. E.	Transmission of power	Oct. 15, 1889
426,127	Kintner, C. J.	Systems of distribution	Apr. 22, 1890
411,150	Kissell, A. S.	Valve-controllers	Sept. 17, 1889
427,237	Kissell, A. S.	Cut-outs, electro-magnetic	May 6, 1890
415,871	Kissell, M. A. and A. S.	Valve-controllers	Nov. 26, 1889
406,916	Kitsee, I.	Batteries, secondary	July 16, 1889
419,588	Kitsee, I.	Locomotion	Jan. 14, 1890
430,960	Kitsee, I.	Telephones, systems	June 24, 1890
426,941	Kleber, O.	Telegraphy, keys	Apr. 29, 1890
411,452	Klein, P. H., jr.	Cut-outs, thermal	Sept. 24, 1889
426,189	Klein, P. H., jr.	Lights, incandescent, special features	Apr. 22, 1890
417,923	Knepper, F. J.	Induction coils	Dec. 24, 1889
406,917	Knight, W. H.	Locomotion	July 16, 1889
406,743	Knight, W. H.	do	July 9, 1889
424,887	Knight, W. H.	do	Apr. 1, 1890
424,888	Knight, W. H.	do	Apr. 1, 1890
425,950	Knight, W. H.	do	Apr. 15, 1890
428,169	Knight, W. H.	Motors	May 20, 1890
11,083	Knight, W. H.	Railways, systems, circuits, multiple arc	June 10, 1890
11,084	Knight, W. H.	Railways, systems, conduits	June 10, 1890
408,016	Knowles, E. R.	Meters	July 30, 1889
408,017	Knowles, E. R.	do	July 30, 1889
408,018	Knowles, E. R.	do	July 30, 1889
408,182	Knowles, E. R.	Alloys	July 30, 1889
409,207	Knowles, E. R.	Galvanometers	Aug. 20, 1889
425,615	Knudson, A. A.	Insulating materials	Apr. 15, 1890
411,042	Kolle, H. W.	Meters	Sept. 17, 1889
406,354	Kookogey, W. P.	Batteries, secondary, applications	July 2, 1889
407,781	Kookogey, W. P.	Batteries, galvanic	July 30, 1889
408,112	Kookogey, W. P.	Batteries, secondary	July 30, 1889
408,629	Kookogey, W. P.	Batteries, galvanic	Aug. 6, 1889
409,106	Kookogey, W. P.	Batteries, secondary	Aug. 13, 1889
409,291	Kookogey, W. P.	Batteries, galvanic	Aug. 20, 1889
410,111	Kookogey, W. P.	Batteries, secondary, applications	Aug. 27, 1889
413,345	Kookogey, W. P.	Batteries, galvanic	Oct. 22, 1889
414,645	Kookogey, W. P.	Railway signals	Nov. 5, 1889
414,772	Kookogey, W. P.	do	Nov. 12, 1889
421,586	Kookogey, W. P.	Lights, sockets and keys	Feb. 18, 1890
422,533	Kookogey, W. P.	Batteries, secondary	Mar. 4, 1890
423,135	Kookogey, W. P.	Batteries, galvanic	Apr. 8, 1890
425,513	Kookogey, W. P.	Insulators	Apr. 15, 1890

No.	NAME.	CLASS.	DATE.
427,429	Koyle, C. H. and Lattig, J. W	Railway signals	May 6, 1890
427,430	Koyle, C. H. and Lattig, J. W	do	May 6, 1890
426,452	Kuehule, J	Locomotion	Apr. 29, 1890
422,082	Ladd, H. W	Telephones, mechanical	Feb. 25, 1890
416,732	La Dow, O. D	Telegraphy, transmitters	Dec. 10, 1889
411,153	Lafferty, S. C	Connectors	Sept. 17, 1889
415,817	Lane, F. A	Clocks, electric	Nov. 26, 1889
417,926	Lane, F. A	Bells	Dec. 24, 1889
417,927	Lane, F. A	Clocks, electric	Dec. 24, 1889
417,928	Lane, F. A	do	Dec. 24, 1889
427,879	Lane, F. A	Annunciators	May 13, 1890
419,962	Lane, G. M	Lights, incandescent, special features	Jan. 21, 1890
419,967	Lane, G. M	do	Jan. 21, 1890
428,008	Lange, P	Lights, arc, gravity feed, gear-clutch	May 13, 1890
420,881	Langhaus, R	Lights, filaments and carbons	Feb. 4, 1890
406,172	Lannert, J. A	Recorders	July 2, 1889
425,435	La Roche, F. A	Magneto-electric	Apr. 15, 1890
414,668	Laughton, W	Medical and surgical, body-wear	Nov. 5, 1889
416,682	Laurence, W. B	Lamp shades	Dec. 3, 1889
409,470	Lawrance, G. McG	Electrodes	Aug. 20, 1889
419,617	Lawton, C. H	Lights, sockets and keys	Jan. 14, 1890
421,864	Layng, W. H	Lights, incandescent, special features	Feb. 18, 1890
416,632	Leber, L. H	Lights, incandescent	Dec. 3, 1889
415,915	Lee, C. E	Annunciators	Nov. 26, 1889
406,223	Lee, J. E	Batteries, galvanic	July 2, 1889
428,499	Legg, J. B. and Nile, J	Locomotion	May 20, 1890
417,052	Leibnitz, F. E	Indicators	Dec. 10, 1889
422,811	Lemairc, P. C. J	Chandeliers	Mar. 4, 1890
409,689	Lemp, H	Telegraphy, lightning arresters	Aug. 27, 1889
410,168	Lemp, H	Lights, filaments and carbons	Sept. 3, 1889
416,339	Lemp, H	Meters	Dec. 3, 1889
420,077	Lemp, H	Lights, sockets and keys	Jan. 28, 1890
421,177	Lemp, H	Cut-outs, electro-magnetic	Feb. 11, 1890
428,616	Lemp, H	Heaters	May 27, 1890
428,617	Lemp, H	do	May 27, 1890
428,618	Lemp, H	Inductariums, transformers, stationary	May 27, 1890
428,619	Lemp, H	Heaters	May 27, 1890
428,620	Lemp, H. and Moody, N. S	Regulators, alternating	May 27, 1890
418,198	Lemp, H. and Thomson, E	Heaters	Dec. 31, 1889
420,882	Lemp, H. and Wightman, M. J	Regulators	Feb. 4, 1890
414,418	Leonard, H. W	Car-brakes	Nov. 5, 1889
430,865	Leonard, H. W	Galvanometers	June 24, 1890
414,714	Leonard, M. B	Heaters	Nov. 12, 1889
427,333	Lewis, W. F	Locomotion	May 6, 1890
418,373	Libbey, H. W	do	Dec. 31, 1889
421,006	Libbey, H. W	Telephones, magnetic	Feb. 11, 1890
411,200	Lichner, F. M	Mining machines	Sept. 17, 1889
421,733	Liedke, E. L	Lights, filaments and carbons	Feb. 18, 1890
407,485	Lighthipe, J. A	Systems of distribution	July 23, 1889
408,887	Lighthipe, J. A	Lights, arc, gravity feed, gear-clutch	Aug. 13, 1889
424,929	Lindenau, E. W	Clocks, electric	Apr. 1, 1890
423,874	Lineff, A. L	Locomotion	Mar. 18, 1890
429,277	Lineff, A. L	do	June 3, 1890
422,534	Linville, J. H	Batteries, galvanic	Mar. 4, 1890
421,179	Little, E. W	Cut-outs, mechanical	Feb. 11, 1890
421,180	Little, E. W	Cut-outs, thermal	Feb. 11, 1890
414,422	Lockwood, J. E	Galvanometers	Nov. 5, 1889
429,727	Lodge, A. J	Telegraphy, lightning arresters	June 10, 1890
417,055	Logan, C. H	Batteries, secondary	Dec. 10, 1889
415,363	Loomis, F. F	Magneto-electric	Nov. 19, 1889
407,225	Loomis, O. P	do	July 16, 1889
410,170	Loomis, O. P	Regulators	Sept. 3, 1889
412,962	Loomis, O. P	Lights, sockets and keys	Oct. 15, 1889
424,562	Loomis, O. P	Telegraphy, lightning arresters	Apr. 1, 1890
424,563	Loomis, O. P	do	Apr. 1, 1890
406,656	Lotz, F	Batteries, galvanic	July 9, 1889
408,984	Love, J. C	Locomotion	Aug. 13, 1889
424,891	Lowrie, W., Hall, C. J. and Kollé, H. W	Meters	Apr. 1, 1890
417,258	Loy, I. W. and O'Toole, R	Railway signals	Dec. 17, 1889
428,174	Ludwig, J. C	Telephones, magnetic	May 20, 1890
416,635	Lungen, A	Igniting devices, automatic	Dec. 3, 1889
416,476	Lyon, E. H	Telephones, electric	Dec. 3, 1889
421,294	Lyke, N	Medical and surgical, baths	Feb. 11, 1890
412,639	Lyte, F. M	Batteries, secondary	Oct. 8, 1889
422,308	Lyte, F. M	do	Feb. 25, 1890
428,116	MacDonald, A. J	Batteries, galvanic	May 20, 1890
426,621	Mackenzie, J. U	Telegraphy, fire	Apr. 29, 1890

No.	NAME.	CLASS.	DATE.
428,050	Macloskie, C. H.	Lighting, systems	May 13, 1890
424,012	MacMaster, M. A.	Electrodes	Mar. 25, 1890
429,199	Macquesten, W. D.	Railways, systems, overhead	June 3, 1890
429,314	Macquesten, W. D.	Electric locomotives	June 3, 1890
429,315	Macquesten, W. D.	Conductors, supports and insulators	June 3, 1890
429,316	Macquesteu, W. D.	do	June 3, 1890
412,928	Macrae, R.	Regulators	Oct. 15, 1889
426,832	Madden, J.	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
422,604	Mahnken, H.	Telegraphy, printing	Mar. 4, 1890
430,868	Mailloux, C. O.	Regulators	June 24, 1890
407,086	Main, W.	Locomotion	July 16, 1889
407,093	Main, W.	do	July 16, 1889
407,094	Main, W.	do	July 16, 1889
407,095	Main, W.	do	July 16, 1889
417,259	Main, W.	do	Dec. 17, 1889
422,956	Malmborg, E. R.	Valve-controllers	Mar. 11, 1890
423,616	Manker, C. W. and G. F.	Induction coils	Mar. 18, 1890
423,617	Manker, C. W. and G. F.	do	Mar. 18, 1890
406,922	Mansfield, G. W.	Motors	July 16, 1889
424,070	Mansfield, G. W.	Locomotion	Mar. 25, 1890
427,589	Marks, H. A.	do	May 13, 1890
407,896	Marquard, F.	Insulating materials	July 30, 1889
407,938	Marquard, F.	do	July 30, 1889
406,751	Martenot, F.	Valve controllers.	July 9, 1889
425,576	Martin, M.	Telegraphy, fire	Apr. 15, 1890
419,861	Marvin, H. N.	Transmission of power	Jan. 21, 1890
420,079	Marvin, H. N.	Motors, alternating	Jan. 28, 1890
420,080	Marvin, H. N.	Transmission of power	Jan. 28, 1890
420,816	Marvin, H. N.	do	Feb. 4, 1890
429,729	Marvin, H. N.	do	June 10, 1890
429,730	Marvin, H. N.	do	June 10, 1890
429,731	Marvin, H. N.	do	June 10, 1890
429,732	Marvin, H. N.	do	June 10, 1890
425,335	Marx, F.	Batteries, galvanic	Apr. 8, 1890
406,364	Mason, C. T.	Watch balances	July 2, 1889
428,684	Mason, J. H.	Batteries, galvanic	May 27, 1890
407,487	Maxim, H. S.	Operating ordnance	July 23, 1889
423,788	Maxwell, G. S.	Telegraphy, lightning arresters	Mar. 13, 1890
417,392	Mayer, E. L. and Liepmann, H.	Batteries, galvanic	Dec. 17, 1889
417,436	Mayer, E. L. and Liepmann, H.	do	Dec. 17, 1889
423,038	Maynadier, J. E.	Locomotion	Apr. 8, 1890
411,900	McCahey, J.	Covering cord	Oct. 1, 1889
411,749	McCarthy, L.	Insulators	Sept. 24, 1889
413,146	McCarthy, L.	do	Oct. 15, 1889
428,854	McCuskey, J. L.	Time-alarms	May 27, 1890
424,993	McCluer, C. E.	Telephones, systems	Apr. 8, 1890
429,576	McCoy, A. T.	Telegraphy, printing	June 3, 1890
429,577	McCoy, A. T.	do	June 3, 1890
423,487	McCullough, G. C.	Telegraphy, fire	Mar. 18, 1890
415,252	McDonald, R. T. and Cain, J.	Locomotive head lights	Nov. 19, 1889
412,528	McDongall, W. M.	Locomotion	Oct. 8, 1889
413,409	McElroy, D. S.	Railway signals	Oct. 22, 1889
413,410	McElroy, D. S.	do	Oct. 22, 1889
413,411	McElroy, D. S.	Electro-magnets	Oct. 22, 1889
413,412	McElroy, D. S.	Railway signals	Oct. 22, 1889
417,438	McElroy, D. S.	Telegraphy, railway-car	Dec. 17, 1889
420,693	McElroy, D. S.	Car brakes	Feb. 4, 1890
409,752	McElroy, W. J.	Locomotion	Aug. 27, 1889
423,488	McEvoy, T. F.	Cut-outs, mechanical	Mar. 28, 1890
415,417	McIlhenny, R. J.	Telegraphy, repeaters	Nov. 19, 1889
412,889	McIntire, C.	Connectors	Oct. 15, 1889
422,058	McIntire, C.	do	Feb. 25, 1890
407,490	McIntosh, G.	Indicators	July 23, 1889
407,414	McKinney, W.	Meters	July 23, 1889
424,338	McKinney, W.	do	Mar. 25, 1890
406,291	McLaughlin, J. F.	Type-writing	July 2, 1889
406,292	McLaughlin, J. F.	do	July 2, 1889
406,293	McLaughlin, J. F.	Bells	July 2, 1889
406,294	McLaughlin, J. F.	do	July 2, 1889
408,666	McLaughlin, J. F.	Batteries, secondary	Aug. 6, 1889
409,613	McLaughlin, J. F.	Type-writing	Aug. 20, 1889
410,007	McLaughlin, J. F.	Batteries, secondary	Aug. 27, 1889
413,933	McLaughlin, J. F.	Telephones, switch-boards	Oct. 15, 1889
416,347	McLaughlin, J.	Lights, arc, special features	Dec. 10, 1889
420,240	McLaughlin, J. F.	Telegraphy, printing	Jan. 28, 1890
424,339	McLaughlin, J. F.	Batteries, secondary, applications	Mar. 25, 1890
424,340	McLaughlin, J. F.	Locomotion	Mar. 25, 1890

No.	NAME.	CLASS.	DATE.
424,809	McLaughlin, J. F.	Batteries, secondary	Apr. 1, 1890
424,810	McLaughlin, J. F.	Locomotion	Apr. 1, 1890
425,818	McLaughlin, J. F.	Batteries, secondary	Apr. 15, 1890
425,819	McLaughlin, J. F.	do	Apr. 15, 1890
427,785	McLaughlin, J. F.	do	May 13, 1890
428,175	McLaughlin, J. F.	Electric locomotives	May 20, 1890
428,934	McLaughlin, J. F.	Cut-outs, mechanical	May 27, 1890
428,935	McLaughlin, J. F.	Cut-outs, electro-magnetic	May 27, 1890
429,049	McLaughlin, J. F.	Metal working, miscellaneous	May 27, 1890
429,359	McLaughlin, J. F.	Type-writing	June 3, 1890
429,360	McLaughlin, J. F.	Time checks	June 3, 1890
409,646	McLellan, J. M.	Magneto-electric	Aug. 20, 1889
416,483	McMahon, J. P.	Telegraphy, fire	Dec. 3, 1889
426,304	McMahon, J. P.	Telegraphy, fire, alarms and extinguishers	Apr. 22, 1890
414,866	Mehren, J. F.	Galvanometers	Nov. 12, 1889
419,862	Mehren, J. F.	Batteries, secondary	Jan. 21, 1890
421,081	Mehren, J. F.	Batteries, galvanic	Feb. 11, 1890
428,280	Mehren, J. F.	Meters	May 20, 1890
407,673	Mellon, J. S.	Medical and surgical, body-wear	July 23, 1889
412,196	Mellon, J. S.	do	Oct. 1, 1889
420,884	Mercadier, E. J. P.	Telegraphy, multiplex	Feb. 4, 1890
409,852	Merrill, J. S.	Drop-lights and hangers	Aug. 27, 1889
408,809	Meserole, A. V.	Batteries, secondary	Aug. 13, 1889
409,996	Meyer, M.	Thermostats	Aug. 27, 1889
427,341	Meyers, H. J.	Magnetic locks and bolts	May 6, 1890
417,931	Miatt, G. W.	Games and toys	Dec. 24, 1889
421,594	Michales, M. A.	Mining machines	Feb. 18, 1890
423,385	Miesse, A.	Alarms	Mar. 11, 1890
423,527	Miller, G. E.	Locomotion	Mar. 18, 1890
430,967	Miller, I. N.	Cut-outs, thermal	June 24, 1890
426,134	Miller, J. J.	Annunciators	Apr. 22, 1890
407,101	Milliken, G. F.	do	July 16, 1889
412,971	Milliken, G. F.	Telegraphy, fire	Oct. 15, 1889
410,555	Milliken, J. A. and C. H. and D'Amour, E.	Printing, tickets	Sept. 3, 1889
421,185	Miner, W. M.	Heaters	Feb. 11, 1890
413,287	Mitchell, J.	Locomotion	Oct. 22, 1889
418,041	Mitchell, N. C.	Separators	Dec. 24, 1889
416,006	Moennich, P.	Indicators	Nov. 26, 1889
411,899	Moffatt, R. R.	Separators	Oct. 1, 1889
409,364	Molyneaux, B. S.	Vending apparatus	Aug. 20, 1889
409,366	Mond, L. and Langer, C.	Batteries, secondary	Aug. 20, 1889
409,365	Mond, L. and Langer, C.	do	Aug. 20, 1889
415,877	Mont-Ross, J. A.	Paper manufactures, feeding	Nov. 26, 1889
423,335	Moorthamers, L.	Batteries, galvanic	Mar. 11, 1890
425,143	Moran, J.	Alarms, burglar	Apr. 8, 1890
428,688	Morehead, J.	Alarms	May 27, 1890
415,345	Moreton, F.	Batteries, galvanic	Nov. 19, 1889
414,868	Morgan, F. E.	Telegraphy, fire	Nov. 12, 1889
427,783	Morgan, F. E. and Lane, F. A.	Railway signals	May 13, 1890
417,497	Morgan, R. A., jr.	Cut-outs, mechanical	Dec. 17, 1889
408,503	Morley, J. H.	Locomotion	Aug. 6, 1889
428,929	Morris, E. P.	Drop-lights and hangers	May 27, 1890
428,930	Morris, E. P.	Conductor supports and insulators	May 27, 1890
408,986	Morris, H. G. and Salom, P. G.	Batteries, secondary	Aug. 13, 1889
428,123	Morrison, D. B.	Wire fences	May 20, 1890
413,261	Mozier, A. M.	Railways, interlocking	Oct. 22, 1889
422,244	Muckle, M. R., jr. and Smith, T. C.	Conductors, underground	Feb. 25, 1890
409,489	Mungesser, P. P.	Brick kilns	Aug. 20, 1889
409,490	Mungesser, P. P.	do	Aug. 20, 1889
426,196	Munsie, J. F.	Conductors, underground	Apr. 22, 1890
426,197	Munsie, J. F.	do	Apr. 22, 1890
426,198	Munsie, J. F.	do	Apr. 22, 1890
426,199	Munsie, J. F.	do	Apr. 22, 1890
426,200	Munsie, J. F.	Connectors	Apr. 22, 1890
426,201	Munsie, J. F.	Conductors, underground	Apr. 22, 1890
426,202	Munsie, J. F.	Insulating materials	Apr. 22, 1890
426,203	Munsie, J. F.	Insulators	Apr. 22, 1890
426,204	Munsie, J. F.	Connectors	Apr. 22, 1890
426,205	Munsie, J. F.	Conductors, underground	Apr. 22, 1890
426,206	Munsie, J. F.	do	Apr. 22, 1890
420,351	Musie, G.	Automatic devices	Jan. 28, 1890
430,675	Nelson, D. C. and Eaton, W. R.	Railways, systems, overhead, trolleys	June 24, 1890
412,529	Neu, G. S.	Valve-controllers	Oct. 8, 1889
412,530	Neu, G. S.	Railway signals	Oct. 8, 1889
11,019	Nevens, F. W.	Apparel, cutting	Aug. 6, 1889
427,789	Nevins, T. F.	Batteries, secondary	May 13, 1890
421,011	Newland, G. F.	Telephones, details	Feb. 11, 1890

No.	NAME.	CLASS.	DATE.
417,075	Newman, N	Igniting devices, automatic	Dec. 10, 1889
417,198	Newman, N	do	Dec. 10, 1889
425,106	Nichols, E. I	Motors	Apr. 8, 1890
406,231	Nicolaus, E. B	Air-pumps, mercury	July 2, 1889
419,059	Niles, H. B	Locomotion	Jan. 7, 1890
412,115	Nix, J. L	Thermostats	Oct. 1, 1889
422,614	Nolan, E. J	Type-writing	Mar. 4, 1890
411,831	Nordenfelt, T	Ordnance, electric appliances	Oct. 1, 1889
417,501	Norton, H. L. and Cooke, F. W	Time checks	Dec. 17, 1889
430,252	Norton, J. A	Cut-outs, mechanical	June 17, 1890
426,049	Norton, J. P	do	Apr. 22, 1890
428,781	Nowotny, J. S	Batteries, galvanic	May 27, 1890
420,954	Nutting, S. E	Applications, general	Feb. 11, 1890
420,955	Nutting, S. E	do	Feb. 11, 1890
421,053	Nutting, S. E	Regulators	Feb. 11, 1890
430,296	Oakman, S	Insulators	June 17, 1890
417,271	O'Connell, J. J	Telephones, systems	Dec. 17, 1889
420,091	O'Connell, J. J	do	Jan. 28, 1890
430,747	O'Connell, J. J	do	June 24, 1890
430,748	O'Connell, J. J	do	June 24, 1890
425,388	Odell, J. B	Locomotion	Apr. 8, 1890
422,616	Olney, W. D	Watch balances	Mar. 4, 1890
419,282	O'Meara, J	Heaters	Jan. 14, 1890
406,057	O'Neil, J. C	Railway signals	July 2, 1889
410,180	Ongley, C. E	Applications, tools and machines	Sept. 3, 1889
410,181	Ongley, C. E	Elevators	Sept. 3, 1889
410,182	Ongley, C. E	Applications, tools and machines	Sept. 3, 1889
410,183	Ongley, C. E	do	Sept. 3, 1889
410,184	Ongley, C. E	do	Sept. 3, 1889
429,318	Ongley, C. E	Telegraphy, fire, alarms and extinguishers	June 3, 1890
408,740	Opperman, A. F	Lights, filaments and carbons	Aug. 13, 1889
414,438	Osburn, H. G	Batteries, secondary	Nov. 5, 1889
418,140	Osburn, H. G	do	Dec. 24, 1889
408,130	Ostermann, H. and Lacroix, C	Alloys	July 30, 1889
415,975	Otto, G	Batteries, galvanic	Nov. 26, 1889
430,432	Oulton, J. and Edmondson, J	Meters	June 17, 1890
406,299	Overpeck, L. C	Photography, combined apparatus	July 2, 1889
424,995	Owen, E. A	Telephones, switch-boards	Apr. 8, 1890
426,307	Paca, W. S	Annunciators	Apr. 22, 1890
417,787	Packard, J. W	Lights, sockets and keys	Dec. 24, 1889
417,788	Packard, J. W	do	Dec. 24, 1889
417,789	Packard, J. W	Lights, incandescent	Dec. 24, 1889
426,055	Packard, J. W	do	Apr. 22, 1890
412,657	Pain, R. W	Self-playing instruments	Oct. 8, 1889
417,680	Pain, R. W	Self-playing instruments, pneumatic	Dec. 17, 1889
427,480	Paine, A. T	Nautical signals	May 6, 1890
422,968	Paine, W. J	Applications, tools and machines	Mar. 11, 1890
410,185	Page, W. N	Endless belts	Sept. 3, 1889
413,810	Paget, L	Systems of distribution	Oct. 29, 1889
408,042	Palmer, D. A	Telegraphy, fire	July 30, 1889
410,013	Parcelle, A. L	Clocks, electric	Aug. 27, 1889
416,122	Park, W. R	Insulators	Nov. 26, 1889
425,625	Parker, E. A	Thermostats	Apr. 15, 1890
422,147	Parker, W. E. and Temple, H. E	Cut-outs, mechanical	Feb. 25, 1890
422,148	Parkhurst, E. B	Motors	Feb. 25, 1890
422,149	Parkhurst, E. B	do	Feb. 25, 1890
421,508	Parks, A. F	Annunciators	Feb. 18, 1890
429,582	Parrish, H. A	Railway signals	June 3, 1890
429,386	Parrish, M. W	Electrolysis	June 3, 1890
410,987	Patten, F. J	Motors, alternating	Sept. 10, 1889
410,988	Patten, F. J	do	Sept. 10, 1889
413,085	Patten, F. J	do	Oct. 15, 1889
418,652	Patten, F. J	Transmission of power	Dec. 31, 1889
418,653	Patten, F. J	do	Dec. 31, 1889
418,654	Patten, F. J	Motors, alternating	Dec. 31, 1889
418,655	Patten, F. J	Transmission of power	Dec. 31, 1889
427,606	Patten, F. J	Electro-magnets	May 13, 1890
428,221	Patten, F. J	Telegraphy, multiplex	May 20, 1890
428,222	Patten, F. J	do	May 20, 1890
428,223	Patten, F. J	do	May 20, 1890
428,224	Patten, F. J	do	May 20, 1890
428,225	Patten, F. J	do	May 20, 1890
428,226	Patten, F. J	do	May 20, 1890
429,735	Patten, F. J	do	June 10, 1890
426,057	Patterson, T	Cut-outs, thermal	Apr. 22, 1890
428,055	Patterson, W. R	Conductors, lead-covered	May 13, 1890
430,297	Patterson, W. R	Conductors, underground	June 17, 1890

No.	NAME.	CLASS.	DATE.
409,116	Patton, W. H.	Locomotion	Aug. 13, 1889
424,817	Patton, W. H.	do	Apr. 1, 1890
415,329	Payen, C.	Batteries, secondary	Nov. 19, 1889
415,330	Payen, C.	Lead	Nov. 19, 1889
415,331	Payen, C.	Batteries, secondary	Nov. 19, 1889
415,332	Payen, C.	Metal founding in metal molds	Nov. 19, 1889
415,333	Payen, C.	Batteries, secondary	Nov. 19, 1889
415,347	Payen, C.	Lead	Nov. 19, 1889
415,348	Payen, C.	do	Nov. 19, 1889
415,349	Payen, C.	do	Nov. 19, 1889
415,683	Payen, C.	do	Nov. 19, 1889
428,942	Pawlowski, J.	Lights, arc, special features	May 27, 1890
424,431	Pearce, F.	Telegraphy, fire	Mar. 25, 1890
411,833	Peck, C. C.	Motors	Oct. 1, 1889
420,543	Peckham, E.	Street cars, steam	Feb. 4, 1890
420,544	Peckham, E.	Street cars	Feb. 4, 1890
420,545	Peckham, E.	Railway cars, axles	Feb. 4, 1890
425,627	Peckham, E.	Locomotion	Apr. 15, 1890
426,570	Peel, W. T.	Regulators	Apr. 29, 1890
418,850	Pendleton, J. H., Bryson, A. J. and Tiers, C.	Railway signals	Jan. 7, 1890
425,107	Penney, H. E.	Locomotion	Apr. 8, 1890
422,438	Penuock, G. B.	Batteries, secondary, applications	Mar. 4, 1890
416,234	Perot, E. S.	Conductors, underground	Dec. 3, 1889
416,235	Perot, E. S.	do	Dec. 3, 1889
424,818	Perret, F. A.	Locomotion	Apr. 1, 1890
408,513	Perry, F. L.	Systems of distribution	Aug. 6, 1889
407,875	Pfannkuche, G.	Regulators	July 30, 1889
413,148	Pfannkuche, G.	Magneto-electric	Oct. 15, 1889
414,076	Pfannkuche, G.	Galvanometers	Oct. 29, 1889
414,245	Pfannkuche, G.	Magneto-electric	Nov. 5, 1889
428,317	Pfannkuche, G.	Regulators	May 20, 1890
429,583	Pfannkuche, G.	Inductoriums, transformers, stationary	June 3, 1890
421,967	Pfatischer, M.	Magneto-electric	Feb. 25, 1890
413,960	Pfingst, L.	Railway cars, brakes	Oct. 29, 1889
430,147	Pfingst, L.	Electric locomotives	June 17, 1890
420,096	Pfluger, C. A.	Telegraphy, lightning arresters	Jan. 28, 1890
413,207	Pfierzheimer, J.	Registers	Oct. 22, 1889
429,736	Pfund, R.	Magneto-electric	June 10, 1890
410,189	Phalau, J. H.	Bells	Sept. 3, 1889
425,902	Philippart, G.	Batteries, secondary	Apr. 15, 1890
425,957	Philippart, G.	do	Apr. 15, 1890
416,803	Phillippi, F. A.	Medical and surgical, body-wear	Dec. 10, 1889
413,629	Phillips, W. A.	Covering cord	Oct. 22, 1889
421,968	Phillips, E. F.	Conductors	Feb. 25, 1890
407,447	Phipps, E. H.	Conductors, underground	July 23, 1889
423,807	Pieper, H., fils.	Lights, arc and incandescent	Mar. 18, 1890
423,873	Pieper, H., fils.	do	Mar. 18, 1890
409,498	Pierce, T. J.	Lights, incandescent, special features	Aug. 20, 1889
429,058	Pierce, H. I.	Conductors, supports and insulators	May 27, 1890
423,697	Pinolet, L. M.	Bells	Mar. 18, 1890
427,521	Platt, O. S. and Orford, J. M.	Cut-outs, mechanical	May 6, 1890
427,522	Platt, O. S. and Orford, J. M.	do	May 6, 1890
427,523	Platt, O. S. and Orford, J. M.	do	May 6, 1890
421,014	Polk, W. R.	Automatic fans	Feb. 11, 1890
408,846	Pond, C. H.	Clocks, electric	Aug. 13, 1889
411,168	Pond, C. H.	do	Sept. 17, 1889
413,731	Poole, C. P.	Locomotion	Oct. 29, 1889
425,579	Popp, V.	Meters	Apr. 15, 1890
407,416	Porter, M. D.	Telegraphy, fire	July 23, 1889
424,725	Porter, M. D.	Annunciators	Apr. 1, 1890
424,726	Porter, M. D.	do	Apr. 1, 1890
425,694	Porter, W. and George, H.	Locomotion	Apr. 15, 1890
425,903	Porter, W. H.	Incrustation	Apr. 15, 1890
429,584	Possons, N. S.	Cut-outs, thermal	June 3, 1890
428,782	Potter, S. M. and Morgan, H. E.	Motors	May 27, 1890
420,697	Powell, N. M.	Alarms, burglar	Feb. 4, 1890
406,468	Powers, J. A.	Cut-outs, mechanical	July 9, 1889
406,469	Powers, J. A.	do	July 9, 1889
418,472	Pratt, C. A.	Meters	Dec. 31, 1889
417,086	Pratt, C. R.	Elevators	Dec. 10, 1889
417,087	Pratt, C. R.	do	Dec. 10, 1889
406,306	Pratt, H. P.	Medical and surgical, body-wear	July 2, 1889
407,115	Pratt, H. P.	do	July 16, 1889
407,116	Pratt, H. P.	Electrodes	July 16, 1889
417,742	Prentiss, H. S.	Telegraphy, circuit-closers	Dec. 24, 1889
418,748	Prescott, G. B., jr.	Batteries, secondary, applications	Jan. 7, 1890
424,997	Prest, J. E.	Cordage, warping	Apr. 8, 1890

No.	NAME.	CLASS.	DATE.
422,445	Priest, E. D.	Locomotion	Mar. 4, 1890
419,355	Pullman, A. B.	Street cars, steam	Jan. 14, 1890
415,350	Pullman, H. B.	Motors	Nov. 19, 1889
416,299	Pumpelly, J. K.	Batteries, secondary	Dec. 3, 1889
417,088	Pumpelly, J. K.	do	Dec. 10, 1889
422,446	Pyle, G. C.	Lights, arc, positive feed, gear-clutch	Mar. 4, 1890
417,089	Rae, F. B.	Regulators	Dec. 10, 1889
421,304	Rae, F. B.	Locomotion	Feb. 11, 1890
421,305	Rae, F. B.	do	Feb. 11, 1890
422,354	Rae, F. B.	Telegraphy, lightning arresters	Feb. 25, 1890
423,391	Rae, F. B.	Locomotion	Mar. 11, 1890
426,064	Rae, F. B.	do	Apr. 22, 1890
426,065	Rae, F. B.	Galvanometers	Apr. 22, 1890
426,066	Rae, F. B.	Locomotion	Apr. 22, 1890
428,136	Rae, F. B.	do	May 20, 1890
430,686	Rae, F. B.	Locomotives	June 24, 1890
429,478	Ramsey, J., jr. and Weir, F. C.	Railway signals	June 3, 1890
419,068	Randall, C. A.	Printing, hand stamps	Jan. 7, 1890
420,890	Randall, C. A.	Indicators	Feb. 4, 1890
411,611	Read, R. H.	Motors, synchronizing	Sept. 24, 1889
411,612	Read, R. H.	Telegraphy, multiplex	Sept. 24, 1889
406,769	Reams, A. J.	Time alarms	July 9, 1889
414,583	Reams, J. M.	Locomotion	Nov. 5, 1889
416,742	Redfield, C. L.	Printing, matrix making	Dec. 10, 1889
416,743	Redfield, C. L.	do	Dec. 10, 1889
418,295	Redfield, C. L.	do	Dec. 31, 1889
429,742	Redfield, C. L.	do	June 10, 1890
424,575	Reed, T. S.	Conductors	Apr. 1, 1890
424,219	Reed, W. G.	Telegraphy, circuit-closers	Mar. 25, 1890
415,335	Reese, J.	Lights, incandescent	Nov. 19, 1889
408,356	Regan, D. S.	Air and gas engines, explosive	Aug. 6, 1889
11,068	Regan, D. S.	do	Apr. 1, 1890
424,935	Reid, E. S.	Conductors, underground	Apr. 1, 1890
429,815	Reilly, J. C.	Conductors	June 10, 1890
11,053	Reitler, C. W.	Medical and surgical, body-wear	Jan. 7, 1890
425,959	Renard, L. M. J. C. C.	Batteries, galvanic	Apr. 15, 1890
412,666	Reno, J. W.	Locomotion	Oct. 8, 1889
420,101	Reno, J. W.	do	Jan. 28, 1890
423,344	Retter, A.	Drills	Mar. 11, 1890
425,630	Rice, D. H.	Telephones, calls	Apr. 15, 1890
425,631	Rice, D. H.	do	Apr. 15, 1890
416,745	Rice, E. W., jr.	Lamp shades	Dec. 10, 1889
416,746	Rice, E. W., jr.	Regulators	Dec. 10, 1889
420,391	Rice, E. W., jr.	Lights, incandescent, special features	Jan. 28, 1890
421,193	Rice, E. W., jr.	Motors, alternating	Feb. 11, 1890
422,975	Rice, E. W., jr.	Regulators	Mar. 11, 1890
426,471	Rice, E. W., jr.	Magneto-electric	Apr. 29, 1890
428,633	Rice, E. W., jr.	Meters	May 27, 1890
430,320	Rice, E. W., jr.	Magneto-electric, couplings	June 17, 1890
411,930	Rice, E. W., jr. and Rohrer, A. L.	Magneto-electric	Oct. 1, 1889
410,023	Richard, F.	Speed measures	Aug. 27, 1889
420,102	Richard, F.	Indicators	Jan. 28, 1890
409,755	Richards, J. E.	Recorders	Aug. 27, 1889
430,683	Richards, W. S.	Systems of distribution	June 24, 1890
414,327	Richards, J. W. and Hall, J. B.	Conductors, underground	Nov. 5, 1889
419,709	Richter, C.	Locomotion	Jan. 21, 1890
409,237	Ries, E. E.	do	Aug. 20, 1889
409,756	Ries, E. E.	do	Aug. 27, 1889
409,757	Ries, E. E.	do	Aug. 27, 1889
411,301	Ries, E. E.	Batteries, secondary, applications	Sept. 17, 1889
414,996	Ries, E. E.	Car-brakes	Nov. 12, 1889
417,333	Ries, E. E.	Locomotion	Dec. 17, 1889
403,194	Riggs, H. T.	Cut-outs, mechanical	July 30, 1889
403,671	Riggs, J. W.	Railway signals	Aug. 6, 1889
406,771	Riker, A. L.	Batteries, secondary	July 9, 1889
407,689	Riker, A. L.	Locomotion	July 23, 1889
403,045	Riker, A. L.	Magneto-electric	July 30, 1889
411,613	Riker, A. L.	Locomotion	Sept. 24, 1889
416,013	Riker, A. L.	Magneto-electric	Nov. 26, 1889
413,312	Ritchie, A. M.	Galvanometers	Oct. 29, 1889
419,710	Robbins, A. C.	Telegraphy, fire, alarms and extinguishers	Jan. 21, 1890
427,014	Roberts, E. F.	Indicators	Apr. 29, 1890
422,976	Roberts, H. P.	Locomotion	Mar. 11, 1890
414,081	Roberts, I. L.	Batteries, galvanic	Oct. 29, 1889
414,953	Roberts, W.	Batteries, secondary	Nov. 12, 1889
412,669	Roberts, W. S. de L. and Mollison, J. S.	Batteries, thermal	Oct. 8, 1889
407,692	Robertson, J. H.	Telegraphy, automatic	July 23, 1889

NO.	NAME.	CLASS.	DATE.
420,833	Robertson, J. H	Telegraphy, automatic	Feb. 4, 1890
425,086	Rebertson, J. H	Telephones, systems	Apr. 8, 1890
418,227	Robinson, E. W	Electrodes	Dec. 31, 1889
430,690	Robinson, W	Conductors, supports and insulators	June 24, 1890
420,964	Robinson, W. H	Indicators	Feb. 11, 1890
410,293	Rockwell, F. C	Lights, incandescent, special features	Sept. 3, 1889
422,634	Rockwell, F. C	Lights, sockets and keys	Mar. 4, 1890
430,437	Rockwell, F. C	Lights, incandescent, special features	June 17, 1890
430,485	Rockwell, F. C	Lights, sockets and keys	June 17, 1890
414,922	Rodman, S., jr	do	Nov. 12, 1889
418,069	Rogers, H. G	Store service	Dec. 24, 1889
418,071	Rogers, H. G	do	Dec. 24, 1889
418,070	Rogers, H. G. and Coyle, A. M	do	Dec. 24, 1889
420,358	Rogers, J. H	Telegraphy, printing	Jan. 28, 1890
413,813	Root, H. C	Cut-outs, thermal	Oct. 29, 1889
430,486	Rose, H. J. F	Wash boilers	June 17, 1890
417,511	Rosebrugh, A. M. and T. R	Anti-induction devices	Dec. 17, 1889
429,286	Rosenfield, W. W	Alarms	June 3, 1890
421,195	Ross, F. and Franzen, A	Regulators	Feb. 11, 1890
423,956	Ross, R	Heaters	Mar. 25, 1890
423,632	Rothenberg, W. F	Bridges, towers	Mar. 18, 1890
418,322	Rounseville, G. L. B	Telegraphy, fire	Dec. 31, 1889
426,395	Rudd, C. H	Railway signals	Apr. 22, 1890
429,483	Rudd, C. H	do	June 3, 1890
417,842	Runkel, J. P	Connectors	Dec. 24, 1889
418,987	Russell, E. C	Lights, arc, positive feed, gear-clutch	Jan. 7, 1890
428,145	Ruttan, H. W	Girders and columns	May 20, 1890
416,754	Sack, J	Telephones, calls	Dec. 10, 1889
423,575	Sack, J	do	Mar. 18, 1890
408,753	Salisbury, W. S	Locomotion	Aug. 13, 1889
408,754	Salisbury, W. S	do	Aug. 13, 1889
430,974	Sanche, H	Conductors	June 24, 1890
418,474	Saunderson, L	Lights, filaments and carbons	Dec. 31, 1889
406,775	Sautter, C. F	Thermostats	July 9, 1889
417,095	Saville, J. J. and Winspear, J. H	Locomotion	Dec. 10, 1889
417,685	Sawyer, H. H	Lights, incandescent	Dec. 17, 1889
412,713	Sayers, W. B. and Sturge, W. H	Drop-lights and hangers	Oct. 8, 1889
428,420	Scott, A. I	Medical and surgical, body-wear	May 20, 1890
410,652	Scott, G. A	do	Sept. 10, 1889
413,735	Schaefer, L	Cut-outs, thermal	Oct. 29, 1889
416,862	Schardt, B. and Lutzenberger, W	Lights, arc, special features	Dec. 10, 1889
420,314	Scheffbauer, R	Lights, arc, gravity feed, gear-clutch	Jan. 28, 1890
424,729	Scherer, F	Applications, general	Apr. 1, 1890
406,961	Schlesinger, W. M	Regulators	July 16, 1889
408,855	Schlesinger, W. M	Locomotion	Aug. 13, 1889
423,959	Schmauser, T	Batteries, galvanic	Mar. 25, 1890
406,776	Schmid, A	Magneto-electric	July 9, 1889
406,777	Schmid, A	do	July 9, 1889
406,858	Schmid, A	do	July 9, 1889
406,859	Schmid, A	do	July 9, 1889
416,240	Schmid, A	do	Dec. 3, 1889
428,289	Schmid, A	do	May 20, 1890
421,320	Schmid, A. and Means, E. C	do	Feb. 11, 1890
417,794	Schmid, A. and Tesla, N	do	Dec. 24, 1889
408,992	Schmidt, J. M	Alarms	Aug. 13, 1889
414,085	Schneider, F. W. A	Telephones, calls	Oct. 29, 1889
428,256	Schneider, J	Magnetic locks and bolts	May 20, 1890
425,004	Schnitz, R	Time alarms	Apr. 8, 1890
408,138	Schoop, P	Batteries, galvanic	July 30, 1889
408,358	Schroeder, C. A. J. H	Lights, filaments and carbons	Aug. 6, 1889
409,508	Schwenke, P	Magnetic locks and bolts	Aug. 20, 1889
411,133	Scribner, C. E	Annunciators	Sept. 17, 1889
415,571	Scribner, C. E	Lights, arc, gravity feed, clutch	Nov. 19, 1889
415,572	Scribner, C. E	do	Nov. 19, 1889
415,573	Scribner, C. E	Telephones, systems	Nov. 19, 1889
415,574	Scribner, C. E	Telegraphy, fire	Nov. 19, 1889
416,275	Scribner, C. E	Telephones, systems	Dec. 3, 1889
416,808	Scribner, C. E	do	Dec. 10, 1889
416,809	Scribner, C. E	do	Dec. 10, 1889
418,757	Scribner, C. E	Lights, arc	Jan. 7, 1890
418,758	Scribner, C. E	Lights, arc, positive feed, clutch	Jan. 7, 1890
420,109	Scribner, C. E	Lights, arc, gravity feed, clutch	Jan. 28, 1890
423,494	Scribner, C. E	Annunciators	Mar. 18, 1890
423,637	Scribner, C. E	Lights, arc, special features	Mar. 18, 1890
423,638	Scribner, C. E	Cut-outs, electro-magnetic	Mar. 18, 1890
427,120	Scribner, C. E	Telephones, systems	May 6, 1890
427,121	Scribner, C. E	do	May 6, 1890

No.	NAME.	CLASS.	DATE.
427,122	Scribner, C. E.	Magneto-electric, hand machines	May 6, 1890
427,123	Scribner, C. E.	Telephones, systems	May 6, 1890
427,194	Scribner, C. E.	do	May 6, 1890
427,621	Scribner, C. E.	do	May 13, 1890
427,622	Scribner, C. E.	Telephones, switch-boards	May 13, 1890
427,623	Scribner, C. E.	Telephones, systems	May 13, 1890
427,624	Scribner, C. E.	do	May 13, 1890
427,917	Scribner, C. E.	do	May 13, 1890
428,698	Scribner, C. E.	do	May 27, 1890
412,045	Scribner, J. F.	Telegraphy, fire	Oct. 1, 1889
414,659	Seafert, W.	Magneto-electric	Nov. 5, 1889
430,696	Seamon, W. H.	Conductors, insulators	June 24, 1890
407,454	See, J. W.	Telegraphy, lightning arresters	July 23, 1889
419,365	Seely, J. A.	Connectors	Jan. 14, 1890
420,171	Seely, J. A.	do	Jan. 28, 1890
423,449	Seely, J. A.	Conductors	Mar. 18, 1890
424,229	Seely, J. A.	Cut-outs, thermal	Mar. 25, 1890
415,738	Seegall, H. R.	Electrolysis	Nov. 26, 1889
420,834	Seib, G. A.	Magnetic locks and bolts	Feb. 4, 1890
414,130	Seifert, F. W. R.	Lights, arc, gravity feed, clutch	Oct. 29, 1889
421,882	Seiler, P.	Telegraphy, fire	Feb. 18, 1890
413,308	Selden, C.	Telephones, magnetic	Oct. 22, 1889
411,474	Sellon, J. S.	Lights, filaments and carbons	Sept. 24, 1889
420,469	Serrell, L. W. and Lufkin, H. L.	Regulators	Feb. 4, 1890
425,961	Seubel, P.	Conductors, underground	Apr. 15, 1890
411,935	Seymour, A. P.	Cut-outs, mechanical	Oct. 1, 1889
411,936	Seymour, A. P.	Lights, arc, special features	Oct. 1, 1889
427,195	Seymour, A. P.	do	May 6, 1890
423,495	Seymour, H. A.	Locomotion	Mar. 18, 1890
420,393	Shafer, B. F.	Telegraphy, transmitters	Jan. 28, 1890
422,981	Shafer, B. F.	Annunciators	Mar. 11, 1890
413,568	Shaffer, C. H.	Thermostats	Oct. 22, 1889
426,688	Shaffer, C. H.	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
411,970	Shallenberger, O. B.	Lighting, systems	Oct. 1, 1889
412,932	Shallenberger, O. B.	Transmission of power	Oct. 15, 1889
412,933	Shallenberger, O. B.	Magneto-electric	Oct. 15, 1889
414,595	Shallenberger, O. B.	Meters	Nov. 5, 1889
419,367	Shallenberger, O. B.	do	Jan. 14, 1890
426,335	Shallenberger, O. B.	do	Apr. 22, 1890
413,309	Shapleigh, W.	Metal founding, soft metals	Oct. 22, 1889
417,516	Shawhan, J. F.	Lights, arc, positive feed	Dec. 17, 1889
420,740	Sheffield, A. J.	Medical and surgical, body-wear	Feb. 4, 1890
424,827	Shelton, W. J.	do	Apr. 1, 1890
421,439	Shipway, T. H. and Dowdell, J. R.	Annunciators	Feb. 18, 1890
430,487	Sholder, L. H.	Lamps and gas fittings, candlesticks	June 17, 1890
407,496	Short, S. H.	Locomotion	July 23, 1889
407,745	Short, S. H.	do	July 23, 1889
408,265	Short, S. H.	Magneto-electric	Aug. 6, 1889
415,070	Short, S. H.	Locomotion	Nov. 12, 1889
417,747	Short, S. H.	do	Dec. 24, 1889
422,096	Short, S. H.	do	Feb. 25, 1890
422,645	Short, S. H.	do	Mar. 4, 1890
427,628	Short, S. H.	Railways, systems, overhead, trolleys	May 13, 1890
429,817	Shubert, H. C.	Alarms, burglar	June 10, 1890
415,577	Siemens, E. W.	Meters	Nov. 19, 1889
415,576	Siemens, W.	Electrolysis	Nov. 19, 1889
417,101	Siersdorfer, M.	Extinguishers, gas	Dec. 10, 1889
429,703	Siliceo, J., jr.	Batteries, galvanic	June 10, 1890
425,911	Sill, R. V. R.	Locomotion	Apr. 15, 1890
425,912	Sill, R. V. R.	do	Apr. 15, 1890
406,599	Silvey, W. L.	Magneto-electric	July 9, 1889
429,067	Simmons, C. H.	Bridges, girders and columns	May 27, 1890
409,375	Simons, R. L.	Conductors, lead-covered	Aug. 20, 1889
424,363	Singer, W. F.	Thermostats	Mar. 25, 1890
425,089	Singer, W. F.	Telegraphy, fire, alarms and extinguishers	Apr. 8, 1890
415,578	Skelton, F. A.	Telegraphy, repeaters	Nov. 19, 1889
407,618	Slattery, M. M. M.	Induction coils	July 23, 1889
407,619	Slattery, M. M. M.	Meters	July 23, 1889
410,860	Slattery, M. M. M.	do	Sept. 10, 1889
424,364	Slentz, E. P. and McGrew, J. B.	Locomotion	Mar. 25, 1890
416,148	Slocum, E. L.	Clocks, electric	Nov. 26, 1889
407,455	Smith, A. T.	Cut-outs, electro-magnetic	July 23, 1889
425,913	Smith, A. J.	Conductors, underground	Apr. 15, 1890
411,689	Smith, C. C. and Martin, H. W.	Medical and surgical, body-wear	Sept. 24, 1889
411,737	Smith, D. W.	Heaters	Sept. 24, 1889
410,037	Smith, F. H.	Batteries, secondary	Aug. 27, 1889
430,758	Smith, H. B.	Separators	June 24, 1890

No.	NAME.	CLASS.	DATE.
418,766	Smith, J. B	Insulators	Jan. 7, 1890
408,327	Smith, J. R	Telephones, systems, automatic	Aug. 6, 1889
424,734	Smith, L. T	Motors, alternating	Apr. 1, 1890
410,212	Smith, R. C	Applications, tools and machines	Sept. 3, 1889
416,381	Smith, R. D. O	Alarms	Dec. 3, 1889
408,676	Smith, T. J	Bells	Aug. 6, 1889
423,286	Smith, W. C	Telegraphy, fire, alarms and extinguishers	Mar. 11, 1890
412,345	Smith, W. F	Batteries, secondary	Oct. 8, 1889
412,346	Smith, W. F	do	Oct. 8, 1889
412,347	Smith, W. F	Connectors	Oct. 8, 1889
415,981	Smith, W. F	Batteries, secondary	Nov. 26, 1889
416,126	Smith, W. F	do	Nov. 26, 1889
420,214	Smith, W. F	Meters	Jan. 28, 1890
422,456	Smith, W. F	Lights, filaments and carbons	Mar. 4, 1890
422,895	Smith, W. F	do	Mar. 4, 1890
427,710	Smith, W. F	Batteries, secondary	May 13, 1890
431,011	Smith, W. J. and Fox, J. W	Railway signals	June 24, 1890
408,901	Snedekor, C. T	Conductors	Aug. 13, 1889
413,331	Snelgrove, W	Scale beams	Oct. 22, 1889
429,068	Sommerville, A. R	Electrodes	May 27, 1890
419,727	Sorley, C	Batteries, secondary	Jan. 21, 1890
419,728	Sorley, C	do	Jan. 21, 1890
420,975	Sorley, C	do	Feb. 11, 1890
422,457	Sorley, C	do	Mar. 4, 1890
423,091	Sorley, C	do	Mar. 11, 1890
421,983	Souders, M. M	Railway signals	Feb. 25, 1890
414,339	Spaulding, H. C	Meters	Nov. 5, 1889
426,338	Spear, A. D	Telegraphy, lightning arresters	Apr. 22, 1890
407,945	Speer, A	Clocks, electric	July 30, 1889
408,762	Speicher, J	Telegraphy, fire	Aug. 13, 1889
416,513	Speicher, J	do	Dec. 3, 1889
420,173	Speicher, J	do	Jan. 28, 1890
426,691	Speicher, J. and Fearey, F. T	do	Apr. 29, 1890
417,753	Spellier, L. H	Clocks, electric	Dec. 24, 1889
430,094	Spencer, A. D	Metal working, tools and implements	June 10, 1890
417,290	Sperry, E. A	Batteries, galvanic	Dec. 17, 1889
418,824	Sperry, E. A	Telegraphy, lightning arresters	Jan. 7, 1890
420,117	Sperry, E. A	Regulators	Jan. 28, 1890
427,711	Spike, C. J. and McLeod, H. V	Telegraphy, fire	May 13, 1890
406,600	Sprague, F. J	Locomotion	July 9, 1889
408,544	Sprague, F. J	do	Aug. 6, 1889
413,151	Sprague, F. J	do	Oct. 15, 1889
424,436	Sprague, F. J	do	Mar. 25, 1890
428,732	Sprague, F. J	Regulators	May 27, 1890
429,327	Sprague, F. J	Electric locomotives	June 3, 1890
414,172	Sprague, F. J. and O'Shaughnessy, P. F	Locomotion	Oct. 29, 1889
427,445	Sprague, G	Conductors, underground	May 6, 1890
429,251	Stafford, J	do	June 3, 1890
423,707	Stanley, A. F	Bells	Mar. 18, 1890
422,651	Stanley, G. E	Insulators	Mar. 4, 1890
419,730	Stanley, L. T	Batteries, galvanic	Jan. 21, 1890
419,731	Stanley, L. T	Induction coils	Jan. 21, 1890
418,659	Stanley, W., jr	Regulators, alternating	Dec. 31, 1889
426,573	Stanley, W., jr	Regulators	Apr. 29, 1890
426,574	Stanley, W., jr	do	Apr. 29, 1890
428,574	Stanley, W., jr	Induction coils	May 20, 1890
428,575	Stanley, W., jr	Inductoriums, transformers, stationary	May 20, 1890
410,656	Statter, J. G	Magneto-electric	Sept. 10, 1889
422,164	Stearns, C. K. and Wheeler, G. K	Locomotion	Feb. 25, 1890
429,705	Steffens, M. J	Photography, cameras	June 10, 1890
427,928	Stellman, J. L	Steam boilers, coverings	May 13, 1890
420,611	Stephens, J. E	Medical and surgical, body-wear	Feb. 4, 1890
424,371	Stephenson, J	Street cars, steam	Mar. 25, 1890
424,372	Stephenson, J	do	Mar. 25, 1890
424,373	Stephenson, J	do	Mar. 25, 1890
424,374	Stephenson, J	Locomotion	Mar. 25, 1890
411,908	Stevens, F	Valve controllers	Oct. 1, 1889
407,746	Stevens, J. W	Closet cisterns	July 23, 1889
428,358	Stevens, N. P	Lights, arc, special features	May 20, 1890
425,466	Stevens, W. F	Telegraphy, railway-car	Apr. 15, 1890
420,705	Stewart, J	Lights, sockets and keys	Feb. 4, 1890
420,706	Stewart, J	do	Feb. 4, 1890
421,630	Stewart, J	do	Feb. 18, 1890
421,114	Stewart, W. M	Telephones, switch-boards	Feb. 11, 1890
420,635	Stieringer, L	Insulators	Feb. 4, 1890
417,525	Stitzel, F	Railways, automatic signals	Dec. 17, 1889
428,970	Stitzel, F	Railway signals	May 27, 1890

No.	NAME.	CLASS.	DATE.
417,526	Stitzel, F. and Weinedel, C.	Railways, automatic signals	Dec. 17, 1889
428,576	Stitzel, F. and Weinedel, C.	Automatic signal-setting apparatus	May 20, 1890
413,795	Stockwell, J. O. and Barrett, A.	Anti-induction devices	Oct. 29, 1889
416,189	Stone, J. B.	Cords and ropes	Dec. 3, 1889
421,781	Stoughton, J. A.	Conductors	Feb. 18, 1890
419,733	Story, C. B.	Lights, incandescent, special features	Jan. 21, 1890
418,853	Storey, I. E.	Magneto-electric	Jan. 7, 1890
418,855	Storey, I. E.	Lights, sockets and keys	Jan. 7, 1890
418,856	Storey, I. E.	Locomotion	Jan. 7, 1890
420,500	Storey, I. E.	Drills	Feb. 4, 1890
408,269	Storey, I. E.	do	Aug. 6, 1889
428,427	Story, R. J. and J. T., Fox, A. E. and Hill, G. J.	Indicators	May 20, 1890
421,449	Stout, J. V.	Valve-controllers	Feb. 18, 1890
421,530	Straight, G. H.	Annunciators	Feb. 18, 1890
411,230	Streeper, D. H.	Alarms	Sept. 17, 1889
412,563	Streeper, D. H.	Alarms, burglar	Oct. 8, 1889
427,204	Stut, J. C. H.	Telephones, electric	May 6, 1890
422,654	Suren, N. H.	Annunciators	Mar. 4, 1890
11,047	Swan, J. W.	Batteries, secondary	Dec. 17, 1889
417,688	Tatham, J.	Conductors, underground	Dec. 17, 1889
416,971	Taylor, E. W.	Alarms, burglar	Dec. 10, 1889
428,026	Taylor, F. C. and Hurd, J. R.	Fulling	May 13, 1890
420,255	Taylor, J. D.	Telephones, calls	Jan. 28, 1890
411,840	Taylor, R. S. and Slattery, M. M. M.	Motors, alternating	Oct. 1, 1889
411,770	Tebbs, H. S., Lane, N. C. and Coombs, V.	Telegraphy, keys	Sept. 24, 1889
406,968	Tesla, N.	Magneto-electric	July 16, 1889
413,353	Tesla, N.	Systems of distribution	Oct. 22, 1889
416,191	Tesla, N.	Motors, alternating	Dec. 3, 1889
416,192	Tesla, N.	do	Dec. 3, 1889
416,193	Tesla, N.	do	Dec. 3, 1889
416,194	Tesla, N.	do	Dec. 3, 1889
416,195	Tesla, N.	do	Dec. 3, 1889
418,248	Tesla, N.	do	Dec. 31, 1889
424,036	Tesla, N.	do	Mar. 25, 1890
428,057	Tesla, N.	Pyro-magneto electric devices	May 13, 1890
414,343	Thackeray, W. T. W. and Hurn, I.	Annunciators	Nov. 5, 1889
420,340	Thomas, M. E.	Medical and surgical, body-wear	Feb. 4, 1890
417,117	Thompson, A. C. and Newton, H. E.	Alarms	Dec. 10, 1889
407,973	Thompson, A. T.	Drop-lights and hangers	July 30, 1889
406,969	Thompson, C. H.	Batteries, secondary	July 16, 1889
415,007	Thompson, D. W.	Thermostats	Nov. 12, 1889
414,267	Thompson, H. E.	do	Nov. 5, 1889
425,269	Thompson, M. E.	Meters	Apr. 8, 1890
425,270	Thompson, M. E.	do	Apr. 8, 1890
426,650	Thompson, R. W.	Locomotion	Apr. 29, 1890
408,678	Thompson, W.	Cut-outs, mechanical	Aug. 6, 1889
412,140	Thompson, W.	Galvanometers	Oct. 1, 1889
416,654	Thompson, W.	do	Dec. 3, 1889
416,655	Thompson, W.	do	Dec. 3, 1889
420,894	Thompson, W.	Rheostats	Feb. 4, 1890
424,032	Thompson, W.	Locomotion	Mar. 25, 1890
420,217	Thompson, W. and Gartner, A.	Indicators	Jan. 28, 1890
411,400	Thompson, W. C.	Batteries, galvanic	Sept. 17, 1889
407,844	Thomson, E.	Motors, alternating	July 30, 1889
409,714	Thomson, E.	Induction coils	Aug. 27, 1889
413,292	Thomson, E.	Galvanometers	Oct. 22, 1889
413,294	Thomson, E.	Locomotion	Oct. 22, 1889
414,266	Thomson, E.	Induction coils	Nov. 5, 1889
415,747	Thomson, E.	Meters	Nov. 26, 1889
415,748	Thomson, E.	do	Nov. 26, 1889
415,749	Thomson, E.	Inductariums, transformers, stationary	Nov. 26, 1889
416,350	Thomson, E.	Meters	Dec. 3, 1889
416,762	Thomson, E.	Induction coils	Dec. 10, 1889
418,249	Thomson, E.	Telegraphy, lightning arresters	Dec. 31, 1889
420,396	Thomson, E.	Inductariums, transformers, stationary	Jan. 28, 1890
421,207	Thomson, E.	Cut-outs, electro-magnetic	Feb. 11, 1890
421,203	Thomson, E.	Systems of distribution	Feb. 11, 1890
422,550	Thomson, E.	Magneto-electric	Mar. 4, 1890
423,965	Thomson, E.	Applications, general	Mar. 25, 1890
423,966	Thomson, E.	Heaters	Mar. 25, 1890
423,967	Thomson, E.	do	Mar. 25, 1890
425,470	Thomson, E.	Systems of distribution	Apr. 15, 1890
425,640	Thomson, E.	Locomotion	Apr. 15, 1890
426,032	Thomson, E.	Cut-outs, thermal	Apr. 22, 1890
423,647	Thomson, E.	Systems of distribution	May 27, 1890
423,648	Thomson, E.	Inductariums, transformers, stationary	May 27, 1890
423,649	Thomson, E.	Meters	May 27, 1890

No.	NAME.	CLASS.	DATE.
428,650	Thomson, E	Motors, alternating	May 27, 1890
428,651	Thomson, E	Systems of distribution	May 27, 1890
428,653	Thomson, E	Telegraphy, lightning arresters	May 27, 1890
428,704	Thomson, E	Cut-outs, mechanical	May 27, 1890
428,705	Thomson, E	Regulators	May 27, 1890
430,357	Thomson, E	Lights, arc, positive feed	June 17, 1890
428,652	Thomson, E. and Alton, G. H.	Lights, sockets and keys	May 27, 1890
410,468	Thomson, E. and Rice, E. W., jr	Induction coils	Sept. 3, 1889
413,293	Thomson, E. and Rice, E. W., jr	Systems of distribution	Oct. 22, 1889
425,588	Thomson, E. and Rice, E. W., jr	Lights, sockets and keys	Apr. 15, 1890
430,326	Thomson, E. and Rice, E. W., jr	Cut-outs, electro-magnetic	June 17, 1890
430,327	Thomson, E. and Rice, E. W., jr	Regulators	June 17, 1890
430,328	Thomson, E. and Rice, E. W., jr	Motors, alternating	June 17, 1890
422,999	Thomson, E. and Rohrer, A. L.	Magneto-electric	Mar. 11, 1890
415,305	Thomson, E. and Tregoning, J.	Soldering clamps	Nov. 19, 1889
413,984	Thone, F.	Regulators	Oct. 29, 1889
418,426	Thone, F.	Lights, sockets and keys	Dec. 31, 1889
416,873	Tilghman, B. C.	Heaters	Dec. 10, 1889
423,708	Tirmann, H.	Friction generators	Mar. 18, 1890
416,243	Tirrell, J. P.	Bells	Dec. 3, 1889
421,636	Titus, E. C.	Telephones, switches	Feb. 18, 1890
425,917	Tortora, E.	Conductors	Apr. 15, 1890
423,886	Toulmin, M.	Fences, railway gates, electric	Mar. 18, 1890
426,222	Tower, G. A.	Railway signals	Apr. 22, 1890
412,567	Tracy, P. J.	Regulators	Oct. 8, 1889
426,479	Tremaine, H. A.	Lights, filaments and carbons	Apr. 29, 1890
407,799	Trowbridge, J. and Sheldon, S.	Telephones, magnetic	July 30, 1889
413,112	Tudor, H.	Batteries, secondary	Oct. 15, 1889
421,088	Tyler, W. P.	Conductors, underground	Feb. 11, 1890
406,797	Van Depoele, C. J.	Locomotion	July 9, 1889
406,798	Van Depoele, C. J.	do	July 9, 1889
407,749	Van Depoele, C. J.	do	July 23, 1889
408,638	Van Depoele, C. J.	do	Aug. 6, 1889
408,639	Van Depoele, C. J.	do	Aug. 6, 1889
408,640	Van Depoele, C. J.	do	Aug. 6, 1889
408,641	Van Depoele, C. J.	Meters, alternating	Aug. 6, 1889
408,642	Van Depoele, C. J.	do	Aug. 6, 1889
409,156	Van Depoele, C. J.	Locomotion	Aug. 13, 1889
413,986	Van Depoele, C. J.	Motors, alternating	Oct. 29, 1889
414,609	Van Depoele, C. J.	Locomotion	Nov. 5, 1889
417,120	Van Depoele, C. J.	do	Dec. 10, 1889
417,121	Van Depoele, C. J.	do	Dec. 10, 1889
417,122	Van Depoele, C. J.	do	Dec. 10, 1889
417,654	Van Depoele, C. J.	do	Dec. 17, 1889
422,265	Van Depoele, C. J.	Magneto-electric	Feb. 25, 1890
422,266	Van Depoele, C. J.	Locomotion	Feb. 25, 1890
422,855	Van Depoele, C. J.	Transmission of power	Mar. 4, 1890
422,856	Van Depoele, C. J.	do	Mar. 4, 1890
422,857	Van Depoele, C. J.	do	Mar. 4, 1890
422,858	Van Depoele, C. J.	do	Mar. 4, 1890
422,859	Van Depoele, C. J.	do	Mar. 4, 1890
422,860	Van Depoele, C. J.	do	Mar. 4, 1890
424,380	Van Depoele, C. J.	Locomotion	Mar. 25, 1890
424,381	Van Depoele, C. J.	do	Mar. 25, 1890
424,695	Van Depoele, C. J.	do	Apr. 1, 1890
429,745	Van Depoele, C. J.	Connectors	June 10, 1890
429,746	Van Depoele, C. J.	Electric locomotives	June 10, 1890
424,910	Van Depoele, C. J.	Locomotion	Apr. 1, 1890
424,911	Van Depoele, C. J.	do	Apr. 1, 1890
429,747	Van Depoele, C. J.	Railways, systems, telpher	June 10, 1890
429,981	Van Depoele, C. J.	Railways, systems, circuits, multiple arc	June 10, 1890
406,377	Vanderpool, A. A.	Annunciators	July 2, 1889
406,975	Van Gestel, J. T.	Batteries, secondary	July 16, 1889
408,768	Van Gestel, J. T.	Magneto-electric	Aug. 13, 1889
410,049	Van Gestel, J. T.	Locomotion	Aug. 27, 1889
410,680	Van Gestel, J. T.	Batteries, secondary	Sept. 10, 1889
413,636	Van Gestel, J. T.	Lights, incandescent	Oct. 22, 1889
424,739	Van Nuis, C. S.	Cut-outs, mechanical	Apr. 1, 1890
409,157	Van Rysselberghe, F.	Telegraphy, reed	Aug. 13, 1889
409,437	Vernette, F.	Dental instruments	Aug. 20, 1889
422,326	Villiers-Stead, F. and Hedgman, E. R.	Vending apparatus	Feb. 25, 1890
429,801	Voegel, W.	Telephones, magnetic	June 10, 1890
430,156	Voelker, W. L.	Lights, incandescent	June 17, 1890
423,004	Vogler, W.	Locomotion	Mar. 11, 1890
423,005	Vogler, W.	do	Mar. 11, 1890
417,758	Von der Kammer, J.	Cut-outs, thermal	Dec. 24, 1889
426,024	Von der Kammer, J.	do	Apr. 22, 1890

No.	NAME.	CLASS.	DATE.
422,746	Von Dolivo-Dobrowolsky, M	Inductoriums, transformers, rotary	Mar. 4, 1890
427,978	Von Dolivo-Dobrowolsky, M	Motors, alternating	May 13, 1890
412,141	Von Hefner-Alteneck, F. and Hoffman, C.	Lights, arc, gravity feed, gear-clutch	Oct. 1, 1889
428,290	Von Siemens, E. W.	Meters	May 20, 1890
410,053	Voss, R.	Friction generators	Aug. 27, 1889
423,400	Voss, D. C.	Locomotion	Mar. 11, 1890
407,801	Votey, E. S.	Self-playing instruments	July 30, 1889
407,802	Votey, E. S.	Organ-bellows	July 30, 1889
430,096	Waddell, M.	Cut-outs, electro-magnetic	June 10, 1890
430,551	Wade, G. H.	Meters	June 17, 1890
421,457	Wadleigh, M.	Medical and surgical, body-wear	Feb. 18, 1890
426,153	Wagemann, E.	Inductoriums, transformers, stationary	Apr. 22, 1890
429,490	Wagemann, E.	Magneto-electric	June 3, 1890
429,825	Wagemann, E.	Regulators	June 10, 1890
419,740	Wagner, F. C.	do	Jan. 21, 1890
406,489	Waldo, H. A.	Telegraphy, keys	July 9, 1889
410,054	Waldron, C. F.	Batteries, secondary	Aug. 27, 1889
406,678	Walker, G. W.	Meters	July 9, 1889
423,361	Wallace, J. S.	Applications, general	Mar. 11, 1890
406,978	Wallace, T.	Batteries, secondary, applications	July 16, 1889
421,790	Walsh, P. B.	Motors	Feb. 18, 1890
422,556	Walter, H. E.	do	Mar. 4, 1890
421,791	Walter, W. C.	Railway signals	Feb. 18, 1890
428,433	Walton, R. T.	Igniting devices, manual	May 20, 1890
427,138	Wamsley, W. F. and McIntosh, T.	Connectors	May 6, 1890
429,396	Ward, C. A.	Clocks, electric	June 3, 1890
409,259	Ward, G. C.	Batteries, galvanic	Aug. 20, 1889
413,215	Warde, G. H.	Conductors, underground	Oct. 22, 1889
424,152	Wardwell, H. H.	Batteries, secondary	Mar. 25, 1890
411,311	Ware, E. R.	Thermostats	Sept. 17, 1889
422,672	Waring, J.	Galvanometers	Mar. 4, 1890
420,422	Warner, E. P.	do	Jan. 28, 1890
425,058	Warner, E. P.	Telephones, switches	Apr. 8, 1890
425,963	Warner, E. P.	do	Apr. 15, 1890
426,155	Warner, E. P.	Street lamps	Apr. 22, 1890
427,530	Warner, E. P.	Regulators	May 6, 1890
428,189	Warner, E. P.	Telephones, systems	May 20, 1890
426,156	Warrell, F. G.	Cut-outs, thermal	Apr. 22, 1890
422,862	Washburn, G. A.	Regulators	Mar. 4, 1890
422,863	Washburn, G. A.	Magneto-electric	Mar. 4, 1890
420,398	Waterhouse, A. G.	Regulators	Jan. 28, 1890
420,924	Waterhouse, A. G.	Magneto-electric	Feb. 4, 1890
427,208	Waters, B. E.	Telephones, systems	May 6, 1890
423,979	Watson, G. B.	Insulators	May 27, 1890
426,343	Watson, J. A.	Magneto-electric	Apr. 22, 1890
415,593	Watson, J. E.	Batteries, galvanic	Nov. 19, 1889
424,337	Watson, N. M.	Alarms, burglar	Mar. 25, 1890
429,982	Watterhouse, E. R.	Telegraphy, keys	June 10, 1890
406,681	Watts, J. H. C.	Lightning rods	July 9, 1889
429,074	Webb, F. W. and Thompson, A. M.	Railway signals	May 27, 1890
416,131	Weeden, H. C.	Urinals	Nov. 26, 1889
416,138	Weeden, H. C.	do	Nov. 26, 1889
406,803	Weems, D. G.	Locomotion	July 9, 1889
406,804	Weems, D. G.	do	July 9, 1889
406,805	Weems, D. G.	do	July 9, 1889
406,806	Weems, D. G.	do	July 9, 1889
425,964	Weems, D. G.	do	Apr. 15, 1890
425,965	Weems, D. G.	Railways, rails	Apr. 15, 1890
425,966	Weems, D. G.	Locomotion	Apr. 15, 1890
424,743	Weinberg, S. S.	Telegraphy, fire, alarms and extinguishers	Apr. 1, 1890
413,270	Welch, O. T.	Fire-escapes, flexible ladders	Oct. 22, 1889
408,151	Welcker, H.	Medical and surgical, body-wear	July 30, 1889
428,735	Weller, F. A.	Magneto-electric	May 27, 1890
408,778	Wellman, H. P.	Ferry guards	Aug. 13, 1889
426,576	Wenström, J.	Magneto-electric	Apr. 29, 1890
415,752	Wesslau, B. H.	Conductors, underground	Nov. 26, 1889
416,143	Wesslau, B. H.	do	Nov. 26, 1889
416,144	Wesslau, B. H.	do	Nov. 26, 1889
415,751	Wesslau, B. H. and Trautwein, G.	do	Nov. 26, 1889
427,489	Westinghouse, G., jr.	Meters	May 6, 1890
423,435	Westinghouse, G., jr.	Lights, filaments and carbons	May 20, 1890
427,022	Weston, E.	Galvanometers	Apr. 29, 1890
415,262	Wetmore, J. A.	Conductors, lead-covered	Nov. 19, 1889
421,535	Wheeler, F.	Locomotion	Feb. 13, 1890
425,720	Wheeler, F. C.	do	Apr. 15, 1890
411,539	Wheeler, G. A.	Conductors, underground	Sept. 24, 1889
409,170	Wheeler, M. C. and Clark, A. M.	Valve-controllers	Aug. 20, 1889

No.	NAME.	CLASS.	DATE.
410,305	Wheless, M	Telephones, electric	Sept. 3, 1889
413,637	Wheless, M	Locomotion	Oct. 22, 1889
417,763	Whilton, F. J	Applications, general	Dec. 24, 1889
427,024	Whitaker, H. B	Cut-outs, mechanical	Apr. 29, 1890
421,214	White, G. W	Telegraphy, relays and sounders	Feb. 11, 1890
419,808	White, Le R. S	Motors	Jan. 21, 1890
421,800	Whitney, R. W. and Cowles, B. K	Telephones, details	Feb. 18, 1890
408,333	Whittingham, G. H	Regulators	Aug. 6, 1889
415,487	Whittingham, G. H	do	Nov. 19, 1889
423,462	Whittingham, G. H	Motors	Mar. 18, 1890
419,902	Wider, E	Telegraphy, fire, alarms and extinguishers	Jan. 21, 1890
415,758	Wiesebroek, F. W. and Huber, E	Telethermometers	Nov. 26, 1889
411,313	Wightman, M. J	Locomotion	Sept. 17, 1889
411,314	Wightman, M. J	do	Sept. 17, 1889
411,947	Wightman, M. J	Rheostats	Oct. 1, 1889
420,370	Wightman, M. J	Lights, sockets and keys	Jan. 28, 1890
423,975	Wightman, M. J	Motors	Mar. 25, 1890
430,329	Wightman, M. J	Railways, systems, multiple arc	June 17, 1890
426,348	Wightman, M. J. and Thomson, E	Magneto-electric	Apr. 22, 1890
418,258	Wiley, E. C	Railway signals	Dec. 31, 1889
429,330	Wilkins, T. M. and Reid, A. H	Voting machines	June 3, 1890
409,088	Williams, G. M	Alarms	Aug. 13, 1889
408,279	Williams, J. B	Batteries, galvanic	Aug. 6, 1889
420,648	Williams, J. B	Heaters	Feb. 4, 1890
420,649	Williams, J. M	Indicators	Feb. 4, 1890
419,166	Williams, J. T	Locomotion	Jan. 7, 1890
428,540	Williams, R. E	Medical and surgical, body-wear	May 20, 1890
421,801	Willms, C. and Leibig, G. A., jr	Batteries, galvanic	Feb. 18, 1890
409,891	Wills, J	Recorders	Aug. 27, 1889
430,453	Willson, T. L	Electrolysis	June 17, 1890
414,741	Wilson, G. W	Lights, incandescent	Nov. 12, 1889
414,742	Wilson, G. W	do	Nov. 12, 1889
414,961	Wilson, H. M	Telephones, supports	Nov. 12, 1889
406,809	Wilson, J. C	Recorders	July 9, 1889
411,407	Wilson, J. C	Telegraphy, fire	Sept. 17, 1889
417,304	Wilson, J. C	Anti-induction devices	Dec. 17, 1889
417,305	Wilson, J. C	do	Dec. 17, 1889
426,554	Wilson, J. C	Recorders	Apr. 29, 1890
426,555	Wilson, J. C	Morse registers	Apr. 29, 1890
428,989	Wilson, W. H	Lamp shades	May 27, 1890
413,879	Winder, W	Connectors	Oct. 29, 1889
430,979	Winegarden, J	Alarms, burglar	June 24, 1890
411,629	Winkler, C. F	Magneto-electric	Sept. 24, 1889
412,349	Winkler, C. F	do	Oct. 8, 1889
412,350	Winkler, C. F	do	Oct. 8, 1889
412,351	Winkler, C. F	do	Oct. 8, 1889
412,352	Winkler, C. F	do	Oct. 8, 1889
412,353	Winkler, C. F	do	Oct. 8, 1889
423,101	Winslow, W. H	Coating with metal	Mar. 11, 1890
417,695	Winsor, P	Telegraphy, lightning arresters	Dec. 17, 1889
417,694	Winsor, P. and Wurts, A	do	Dec. 17, 1889
427,387	Winton, H. D	Railway signals	May 6, 1890
414,356	Wirt, C	Telegraphy, lightning arresters	Nov. 5, 1889
421,464	Wirt, H. C	Locomotion	Feb. 18, 1890
407,386	Wiswell, J. C	Solution and precipitation	July 23, 1889
410,228	Wiswell, J. C	Solution, precipitation, and chlorination	Sept. 3, 1889
429,104	Witthaus, E. L	Conductors, underground	May 27, 1890
410,059	Wolf, J. J	Telephones, supports	Aug. 27, 1889
423,299	Wolf, J. J	Telephones, details	Mar. 11, 1890
417,458	Wolff, C. H	Batteries, galvanic	Dec. 17, 1889
419,487	Wollensak, J. F	Telegraphy, circuit-closers	Jan. 14, 1890
421,339	Wollensak, J. F	Alarms, burglar	Feb. 11, 1890
421,340	Wollensak, J. F	Telegraphy, circuit-closers	Feb. 11, 1890
421,802	Wollensak, J. F	Connectors	Feb. 18, 1890
422,360	Wollin, W. F. and Werline, E. H	Lights, sockets and keys	Feb. 25, 1890
428,030	Wolstencroft, J. and Soley, W. H	Fire-arms, ball traps	May 13, 1890
418,483	Woelf, A. E	Batteries, secondary	Dec. 31, 1889
420,850	Wood, F. B	Recorders	Feb. 4, 1890
420,851	Wood, F. B	do	Feb. 4, 1890
420,852	Wood, F. B	do	Feb. 4, 1890
424,635	Wood, F. B	Telephones, calls	Apr. 1, 1890
406,492	Wood, J. J	Magneto-electric	July 9, 1889
406,493	Wood, J. J	Regulators	July 9, 1889
406,494	Wood, J. J	do	July 9, 1889
407,914	Wood, J. J	Lights, arc, special features	July 30, 1889
412,354	Wood, J. J	Galvanometers	Oct. 8, 1889
412,818	Wood, J. J	Telephones, switch-boards	Oct. 15, 1889

No.	NAME.	CLASS.	DATE.
417,915	Wood, J. J.	Lights, arc, gravity feed, gear-clutch	July 30, 1889
418,301	Wood, J. J.	Magneto-electric	Dec. 31, 1889
418,302	Wood, J. J.	Regulators	Dec. 31, 1889
418,303	Wood, J. J.	do	Dec. 31, 1889
420,138	Wood, J. J.	do	Jan. 28, 1890
423,102	Wood, J. J.	Cut-outs, thermal	Mar. 11, 1890
426,405	Wood, J. J.	Lights, arc, gravity feed, gear-clutch	Apr. 22, 1890
426,699	Wood, J. J.	Regulators	Apr. 29, 1890
424,441	Wood, W. M.	Heaters	Mar. 25, 1890
424,442	Wood, W. M.	Projectiles	Mar. 25, 1890
423,014	Woodbury, L. S.	Bells	Mar. 11, 1890
407,272	Woolley, L. G.	Motors	July 16, 1889
430,722	Word, J. J.	Lights, arc, gravity feed, gear-clutch	June 24, 1890
415,600	Wotton, J. A. and Polk, W. R., jr.	Batteries, secondary	Nov. 19, 1889
422,681	Wray, J. C.	Magneto-electric	Mar. 4, 1890
413,703	Wurts, A.	Cut-outs, thermal	Oct. 29, 1889
419,094	Wynne, F.	Locomotion	Jan. 7, 1890
424,665	Young, C. G.	Regulators	Apr. 1, 1890
414,624	Young, C. I.	Telegraphy, lightning arresters	Nov. 5, 1889
415,990	Zigang, J. P.	Bells	Nov. 26, 1889
413,008	Zipernowsky, C.	Magneto-electric	Oct. 15, 1889
425,923	Zipernowsky, C., Déri, M. and Bláthy, O. T.	Motors, alternating	Apr. 15, 1890
408,785	Zoeller, T. J.	Igniting devices, automatic	Aug. 13, 1889



3 9088 00044 9173
SMITHSONIAN INSTITUTION LIBRARIES